

# Lake Arrowhead Community Plan

Draft Community Plan  
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# TABLE OF CONTENTS

<b>1 INTRODUCTION</b>	7
<a href="#">LA1.1 PURPOSE OF THE COMMUNITY PLAN</a>	7
<a href="#">LA1.2 COMMUNITY BACKGROUND</a>	7
<a href="#">LA1.2.1 Location</a>	7
<a href="#">LA1.2.2 History</a>	11
<a href="#">LA1.2.3 Description of the Study Area</a>	11
<a href="#">LA1.3 COMMUNITY CHARACTER</a>	12
<a href="#">LA1.3.1 Unique Characteristics</a>	12
<a href="#">LA1.3.2 Issues and Concerns</a>	12
<a href="#">LA1.3.3 Community Priorities</a>	12
<b>2 LAND USE</b>	15
<a href="#">LA2.1 INTRODUCTION</a>	15
<a href="#">2.2 GOALS AND POLICIES</a>	23
<b>3 CIRCULATION AND INFRASTRUCTURE</b>	27
<a href="#">LA3.1 INTRODUCTION</a>	27
<a href="#">LA3.2 CIRCULATION – INTRODUCTION</a>	27
<a href="#">LA3.3 GOALS AND POLICIES - CIRCULATION</a>	35
<a href="#">LA3.4 INFRASTRUCTURE - INTRODUCTION</a>	38
<a href="#">LA3.5 GOALS AND POLICIES - INFRASTRUCTURE</a>	45
<b>4 HOUSING</b>	47
<b>5 NOISE</b>	49
<b>6 OPEN SPACE</b>	51
<a href="#">LA6.1 INTRODUCTION</a>	51
<a href="#">LA6.2 GOALS AND POLICIES</a>	57
<b>7 CONSERVATION</b>	59
<a href="#">LA7.1 INTRODUCTION</a>	59
<a href="#">LA7.2 GOALS AND POLICIES</a>	59
<b>8 SAFETY</b>	61
<a href="#">LA8.1 INTRODUCTION</a>	61
<a href="#">LA8.2 GOALS AND POLICIES</a>	70
<b>9 ECONOMIC DEVELOPMENT</b>	71
<a href="#">LA 9.2 GOALS AND POLICIES</a>	71
<b>10 UNIQUE DEVELOPMENT STANDARDS</b>	73
<a href="#">LA10.1 REFERENCE</a>	73
<b>APPENDIX</b>	75

## LIST OF FIGURES

<a href="#">FIGURE 1-1, VICINITY/REGIONAL CONTEXT MAP</a>	9
<a href="#">FIGURE 2-1, LAND USE POLICY MAP</a>	17
<a href="#">FIGURE 3-1, CIRCULATION MAP</a>	29
<a href="#">FIGURE 3-2, WATER DISTRICTS MAP</a>	39
<a href="#">FIGURE 3-3, WASTEWATER SYSTEM MAP</a>	43
<a href="#">FIGURE 6-1, JURISDICTIONAL CONTROL MAP</a>	53
<a href="#">FIGURE 6-2, TRAILS MAP</a>	55
<a href="#">FIGURE 8-1, FIRE DISTRICTS MAP</a>	63
<a href="#">FIGURE 8-2, FIRE STATIONS MAP</a>	65



## COMMUNITY PLAN/TABLE OF CONTENTS

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### LIST OF TABLES

<a href="#">TABLE 1: DISTRIBUTION OF GENERAL PLAN LAND USE DISTRICTS</a> .....	19
<a href="#">TABLE 2: LAND USE POLICY MAP MAXIMUM POTENTIAL BUILD-OUT</a> .....	21
<a href="#">TABLE 3: POPULATION, HOUSEHOLDS AND EMPLOYMENT PROJECTION 2000-2030</a> .....	22
<a href="#">TABLE 4: EXISTING AND FUTURE ROADWAY OPERATING CONDITIONS</a> .....	33
<a href="#">TABLE 5: CMP FACILITY LEVELS OF SERVICE</a> .....	34
<a href="#">TABLE 6: SUPPLY AND POLICY INFORMATION OF SERVICE PROVIDERS</a> .....	41
<a href="#">TABLE 7: WASTE WATER AGENCIES/DISTRICTS</a> .....	45
<a href="#">TABLE 8: FIRE STATIONS</a> .....	67

# 1 INTRODUCTION

## LA1.1 PURPOSE OF THE COMMUNITY PLAN

The primary purpose of the Lake Arrowhead Community Plan is to guide the future use and development of land within the Lake Arrowhead Community Plan area in a manner that preserves the character and independent identity of the individual communities within the area. By setting goals and policies for the Lake Arrowhead Community that are distinct from those applied countywide, the Community Plan outlines how the County of San Bernardino will manage and address growth while retaining the attributes that make Lake Arrowhead unique.

Community plans focus on a particular community within the overall area covered by the General Plan of a jurisdiction. As an integral part of the overall General Plan, a community plan must be consistent with the General Plan. To facilitate consistency, the Lake Arrowhead Community Plan builds upon the goals and policies of each element of the General Plan. However, to avoid repetition, those goals and policies defined within the overall General Plan that adequately address the conditions of the community will not be repeated in this or other community plans. Instead, the policies that are included within the community plan should be regarded as refinements of broader General Plan goals and policies that have been customized to meet the specific needs or unique circumstances within individual communities.

## LA1.2 COMMUNITY BACKGROUND

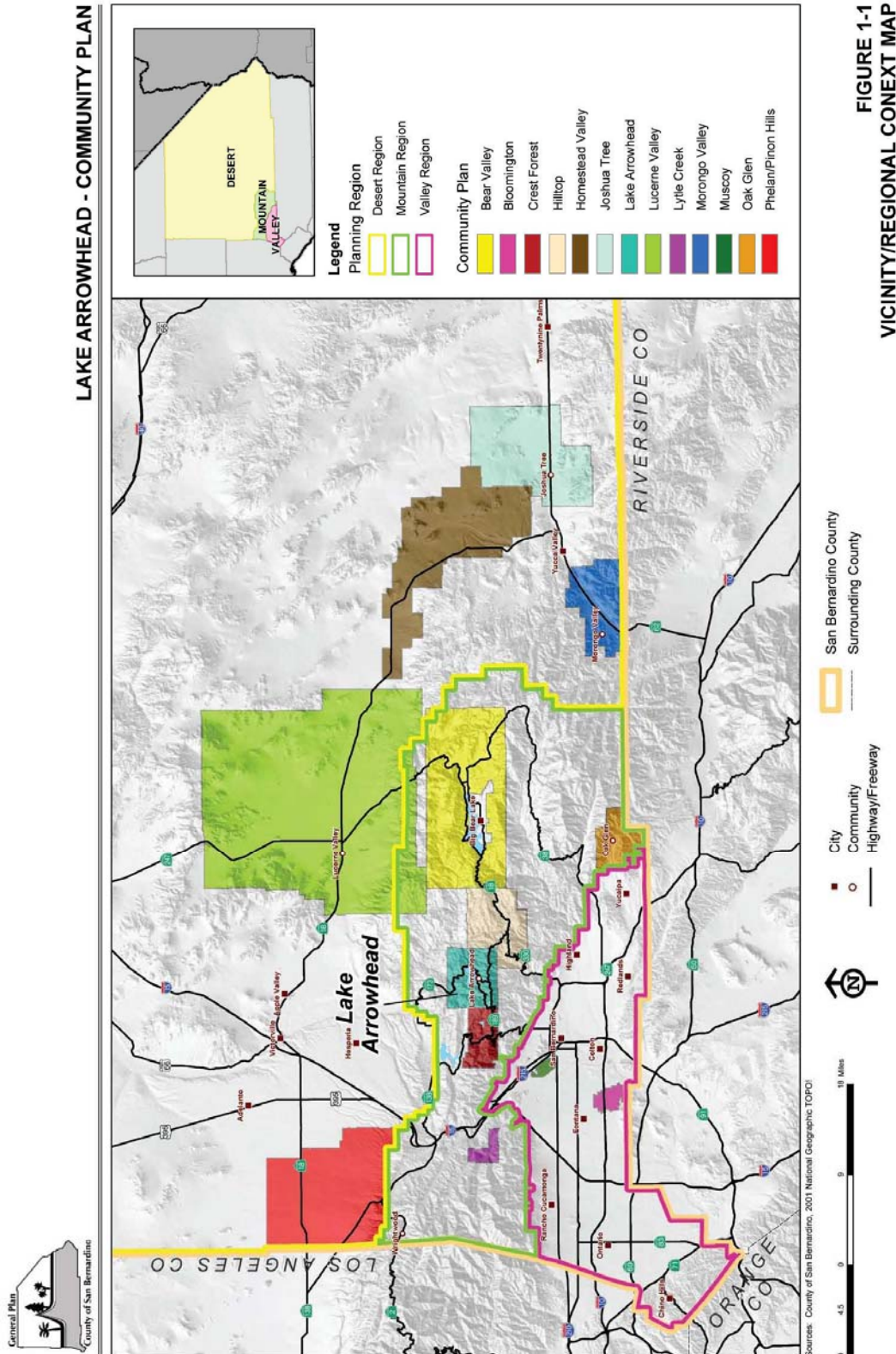
### LA1.2.1 LOCATION

The Plan area is located in the San Bernardino Mountains and is surrounded by the San Bernardino National Forest. The Lake Arrowhead Plan area is bound to the southwest by the Crestline Community Plan and to the southeast by the Hilltop Community Plan. The Lake Arrowhead Community Plan area encompasses approximately 30 square miles and includes the communities of Agua Fria, Blue Jay, Cedar Glen, Crest Park – Meadowbrook Woods, Deer Lodge Park, Lake Arrowhead, Rimforest, Skyforest and Twin Peaks. (See Figure 1-1, Vicinity, Regional Context Map).

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# INTRODUCTION



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## INTRODUCTION

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### LA1.2.2 HISTORY

In 1851, when the Mormons purchased land from the early Spanish settlers and founded the City of San Bernardino, there was an immediate need for lumber to build homes, churches, stores, and civic buildings. During the 1860's, as the area attracted settlers into the valley, there was a heavy demand on the lumber mills that were scattered across the mountain top. During this period, the Lake Arrowhead area was opened to logging. At various times, there were mills in Twin Peaks, Blue Jay, Grass Valley, Cedar Glen and what is now Lake Arrowhead. By the late 1800's the value of the mountains as a watershed to protect and foster growth in the valley became apparent. In 1890, Congress enacted the Forest Reserve Act and in 1893 the San Bernardino Forest Reserve was established.

Some businessmen organized the Arrowhead Reservoir Company and constructed Little Bear dam in 1904 to create a large reservoir in Little Bear Valley. In 1912, the plans were halted by a State Supreme Court decision that water from one watershed could not be diverted to another for irrigation. Later, the holdings of the Arrowhead Reservoir Company (which had been transferred to a new corporation, the Arrowhead Reservoir and Power Company) were purchased by the Lake Arrowhead Company, a syndicate headed by Benton VanNuys, a prominent Los Angeles entrepreneur. The new owners completed the dam and developed the lake and adjacent lands into a resort.

Over the next thirty years, the area flourished as a fashionable summer resort for the rich and famous. Exclusive hotel and recreation facilities were constructed and lands adjacent to the lake were subdivided for private residences. In 1946, the property holdings of the Lake Arrowhead Company were sold to the Los Angeles Turf Club, which, in turn, sold out to the Lake Arrowhead Development Company in 1960. Since then, there were several changes in ownership and most of the land has been subdivided into residential lots. The Lake is now owned by the Arrowhead Lake Association, who has exclusive rights for use of Lake Arrowhead. It is now only open to the general public through the purchase of daily passes.

The original Lake Arrowhead Community Plan was adopted in August, 1981. The Plan was intended as a short range plan to implement those portions of the General Plan that directly affected the community of Lake Arrowhead. The 1989 General Plan update proposed that comprehensive community plans be incorporated into the General Plan and Development Code, however full incorporation was not completed due to budget and staff constraints. The Phase I Scoping of the 2006 General Plan update, recommended that the Community Plan program be reinstated to help fulfill the need for development guidance within certain unique communities within the County. The Lake Arrowhead Community was selected as one of 13 areas that would have a community plan prepared in conjunction with Phase II of the San Bernardino County General Plan update.

### LA1.2.3 DESCRIPTION OF THE STUDY AREA

Lake Arrowhead is located approximately 85 miles east of the City of Los Angeles and 23 miles north of the City of San Bernardino. The altitude of the Lake Arrowhead plan area averages over 5,000 feet. This provides for a mild climate and four distinct seasons. Average temperatures range from 37 degrees Fahrenheit in the winter months to 68 degrees Fahrenheit in the summer months. Precipitation averages 45 to 50 inches per year. Precipitation occurs mostly in the form of snow, with up to 3 to 4 feet at one time.

The planning area is in a heavily wooded mountainous terrain with steep slopes and numerous ravines. Soil types range from outcropping and decomposing granites to alluvial deposits on the valley floors. No major earthquake faults are located in the immediate area.

## **LA1.3 COMMUNITY CHARACTER**

### **LA1.3.1 UNIQUE CHARACTERISTICS**

The Lake Arrowhead Community Plan area is known as a charming, small-town mountain community that is attractive to tourists and residents alike for its climate, recreational amenities, scenic resources and sense of remoteness from urban life.

### **LA1.3.2 ISSUES AND CONCERNS**

Several issues set Lake Arrowhead apart from other Mountain communities suggesting that different strategies for future growth may be appropriate. Among these are:

#### **A. THREATS TO QUALITY OF LIFE AND PRESERVATION OF COMMUNITY CHARACTER**

Residents feel that the high quality of life experienced in their neighborhoods today should not be degraded by growth and the subsequent impacts of traffic congestion, strains on infrastructure and threats to natural resources. The clean air, ambient quiet, dark skies, abundant wildlife and rich natural vegetation are valued highly by residents as well as by the visitors who frequent the area. Residents are concerned about the conversion of natural open space to development and particularly to a type of development that detracts from the natural setting and the mountain character currently enjoyed by the community. The preservation of the community's natural setting, small-town atmosphere and mountain character becomes important not only from an environmental sustainability perspective but from a cultural and economic point of view.

#### **B. INFRASTRUCTURE**

Like much of San Bernardino County, Lake Arrowhead faces the potential for significant growth. Residents are concerned with the impacts that future growth and development will have on an infrastructure system they sense is already strained. The community's primary concerns centered around water supply and traffic and circulation.

### **LA1.3.3 COMMUNITY PRIORITIES**

The community's common priorities that have influenced the goals and policies included within this Community Plan are:

#### **ENVIRONMENT**

A key consideration in developing this Plan has been acknowledging the potential impacts that future development will have on the area's valued natural resources. The goals and policies included in this Community Plan emphasize protection of these sensitive resources, the integration of natural vegetation and open space and development that is scaled and designed to sustain the natural surroundings. In public workshops held to develop the General Plan and this Community Plan, the public has identified the following principle planning issues and concerns to be addressed in the Plan:

## INTRODUCTION

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- A. A community in a forest – the natural environment prevails.
- B. Ensure no conflict in the interface between the national forest and adjacent land uses.
- C. Conservation of natural resources and scenic beauty.

### COMMUNITY CHARACTER

The Lake Arrowhead Community Plan area will continue to experience growth as a variety of factors continue to drive people to migrate from more urban areas to areas attractive for their rural nature. As the mountain develops it will be imperative that adequate services and infrastructure are provided, that all improvements reflect the needs of local residents as well as visitors, that all development maintains a sense of connection to the natural environment and that the small-town, mountain character of the community is preserved. Relating to community character, the public has identified the following issues and concerns to be reflected and addressed in the Community Plan:

- A. Acknowledge service and infrastructure capacity and limitations of the area, particularly roads and water to serve future development.
- B. Protect and preserve the rural mountain character of the community by maintaining primarily low-density residential development and compatible commercial development.
- C. Maintain the value of Lake Arrowhead's scenic and natural resources which are the foundation of the community character and quality of life.

## INTRODUCTION

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## 2 LAND USE

### LA2.1 INTRODUCTION

The purpose of the land use element is to address those goals and policies that deal with the unique land use issues of the Community Plan area that are not addressed by the overall County General Plan. Land use, and the policies that govern it, contribute fundamentally to the character and form of a community.

With the continuing growth in many of the county's rural areas, the importance of protecting valuable natural resources, habitats and preserving the rural character of these unique areas has become increasingly important. The purpose of the Land Use Policy Map is to provide for orderly growth that will preserve the existing mountain character of the community and protect the plan areas natural resources. The Lake Arrowhead Land Use Policy Map is provided in Figure 2-1<sup>1</sup>.

The Lake Arrowhead Community plan area is contained within the San Bernardino National Forest. That portion of the National Forest that is within the Lake Arrowhead plan area comprises 10,234.55 acres which equates to approximately 53% of the total acreage within the plan area. Table 1 provides the general plan land use district distribution for the Lake Arrowhead Community plan area. As shown in Table 1, the most prominent land use district within the plan area is Single Residential (RS), which makes up approximately 66% or 5,957.77 acres of the total land area that is under County jurisdiction. The second most prominent land use district within the plan area is Resource Conservation (RC), which makes up approximately 14.6% or 1,312.99 acres of the land under County jurisdiction. The Lake Arrowhead Plan area also contains Special Development (SD), Multiple Residential (RM), Office Commercial (CO), Neighborhood Commercial (CN), General Commercial (CG), Service Commercial (CS), Community Industrial (IC), Institutional (IN), and Floodway (FW) land use districts, however these land use districts only make up a small percentage of the total plan area. The plan area is characterized primarily by residential and recreational uses. Most of the commercial land uses are concentrated in three nodes; one in the community of Blue Jay, the second in downtown Lake Arrowhead and the third in the community of Cedar Glen.

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<sup>1</sup> For definitive mapping detail, please refer to the official Lake Arrowhead Land Use Policy Map.

## LAND USE

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LAKE ARROWHEAD - COMMUNITY PLAN

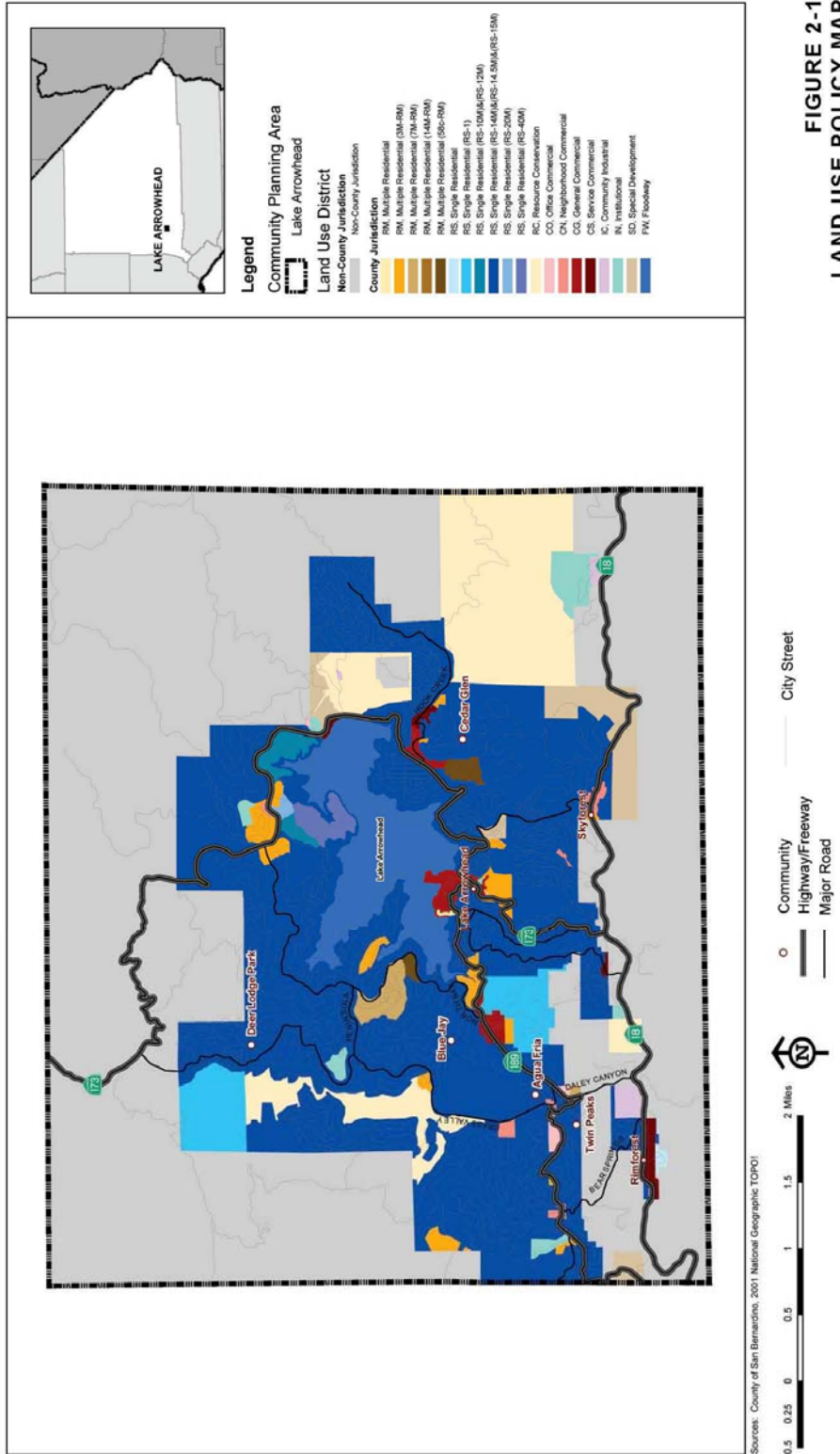


FIGURE 2-1  
LAND USE POLICY MAP

## LAND USE

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## LAND USE



**Table 1: Distribution of General Plan Land Use Districts**

Land Use	Area (Acres) <sup>2</sup>	(%) Of Total Land Area
Resource Conservation (RC)	1,312.99	14.61%
Single Residential (RS)	11.02	0.12%
Single Residential 1 (RS-1)	339.03	3.77%
Single Residential 10,000 (RS-10M)	65.50	0.73%
Single Residential 12,000 (RS-12M)	19.89	0.22%
Single Residential 14,000 (RS-14M)	5,425.60	60.39%
Single Residential 14,500 (RS-14.5M)	17.24	0.19%
Single Residential 15,000 (RS-15M)	6.41	0.07%
Single Residential 20,000 (RS-20M)	11.50	0.13%
Single Residential 40,000 (RS-40M)	61.58	0.69%
Multiple Residential (RM)	3.05	0.03%
Multiple Residential 14,000 (14M-RM)	0.54	0.01%
Multiple Residential 3,000 (3M-RM)	196.52	2.19%
Multiple Residential 5,800 (58C-RM)	38.51	0.43%
Multiple Residential 7,000 (7M-RM)	71.02	0.79%
Special Development (SD)	296.61	3.30%
Office Commercial (CO) [to be redesignated]	24.51	0.27%
Neighborhood Commercial (CN)	49.76	0.55%
General Commercial (CG)	103	1.15%
Service Commercial (CS)	48	0.53%
Community Industrial (IC)	42.86	0.48%
Institutional (IN)	133.64	1.49%
Floodway (FW)	706.01	7.86%
Total Land Area Within Community Plan Boundary	8,984.79	100%

Source: URS Corporation.

### **A. Community Character (Land Use Issues/Concerns)**

During public meetings held by the County, many of the residents expressed concerns regarding future growth respecting the unique natural amenities and characteristics of the area. The mountain character of the Lake Arrowhead community is defined in part by the prominence of single residential development on large lots, the placement of homes, varied setbacks and elevations, diverse architecture, natural vegetation, natural topography and open spaces around the homes. The character of the community is further defined by the recreational tourism opportunities, natural environment, and limited commercial and industrial uses.

<sup>2</sup> Non-jurisdictional lands within the Lake Arrowhead Community Plan area were extracted from the areas included within the table.

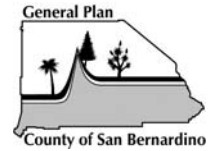
## LAND USE

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Input gathered from residents of Lake Arrowhead suggests that the primary land use concern is that the mountain character of the area is preserved. Residents of the Lake Arrowhead community emphasized that to preserve the type of community that exists today, future growth should be managed to preserve the same balance of land uses. The Lake Arrowhead community is predominately a single family residential and recreational community. Residents would like to preserve the predominance of single-family residential uses and ensure that non-residential land uses, including recreational uses, are developed to serve the needs of local residents and limited tourist needs. Residents are concerned with the potential impacts of future growth, including potential strains on infrastructure and services, degradation of the natural environment, and loss of the existing small-town character. In addition residents articulated concerns with the location of future industrial and commercial development and the development potential of existing large parcels of land.

Table 2 provides the Land Use Policy Map Maximum Potential Build-out for the Lake Arrowhead Community plan area. This build-out scenario provides the maximum build-out potential of the Community Plan area based on the Land Use Policy Map. Table 2 does not account for constraints to the maximum build-out potential. However, all development within the Lake Arrowhead community plan area, in particular residential development is limited by provisions of the Fire Safety Overlay. The maximum build-out potential is constrained substantially by the slope-density standards and fuel modification requirements of the Fire Safety Overlay.

## LAND USE



**Table 2: Land Use Policy Map Maximum Potential Build-Out**

Land Use District	Land Use Policy Map Maximum Potential Build-Out		
	Area (Acres)	Density	Maximum Policy Map Build-Out
		D.U. Per Acre	D.U.'s
Resource Conservation (RC)	1,312.99	0.025	32.82
Single Residential (RS)	11.02	6.05	66.67
Single Residential 1(RS-1)	339.03	1.0	339.03
Single Residential 10,000 (RS-10M)	65.50	4.36	285.58
Single Residential 12,000 (RS-12M)	19.89	3.63	72.20
Single Residential 14,000 (RS-14M)	5,425.6	3.11	16,873.62
Single Residential 14,500 (RS-14.5M)	17.24	3.0	51.79
Single Residential 15,000 (RS-15M)	6.41	2.90	18.61
Single Residential 20,000 (RS-20M)	11.50	2.18	25.05
Single Residential 40,000 (RS-40M)	61.58	1.09	67.06
Multiple Residential (RM)	3.05	14.0	42.70
Multiple Residential 14,000 (14M-RM)	0.54	3.11	1.68
Multiple Residential 3,000 (3M-RM)	196.52	14.52	2,853.47
Multiple Residential 5,800 (58C-RM)	38.51	7.51	289.22
Multiple Residential 7,000 (7M-RM)	71.02	6.22	441.95
Special Development (SD)	296.61	2.0	593.22
<b>TOTAL RESIDENTIAL</b>	<b>7,877.01</b>	-	<b>22,054</b>
		<b>FAR<sup>1</sup> [to be completed]</b>	<b>SQUARE FEET<sup>2</sup> [to be completed]</b>
Office Commercial (CO)	24.51		
Neighborhood Commercial (CN)	49.76		
General Commercial (CG)	103		
Service Commercial (CS)	48		
Community Industrial (IC)	42.86		
Institutional (IN)	133.64		
Floodway	706.01		
<b>TOTAL NON-RESIDENTIAL</b>	<b>1,107.78</b>		
Source: Stanley R. Hoffman Associates, Inc. and URS Corp.			
Notes:			
(1) Floor Area Ratio (FAR) is a measure of development intensity. FAR is defined as the gross floor area of a building permitted on a site divided by the total area of the lot. For instance, a one-story building that covers an entire lot has an FAR of 1. Similarly, a one-story building that covers 1/2 of a lot has an FAR of 0.5.			
(2) The total square feet for the non-residential land use designations was calculated by multiplying the area (acres) by the FAR and then converting the total acres to square feet. 43,560 square feet = 1 acre			

## LAND USE

Table 3 outlines the projected growth in the Lake Arrowhead Community Plan area over the period 2000-2030 and compares that growth to the maximum potential build-out shown in Table 2. The table includes population, households and employment projections based on the Land Use Policy Map Maximum Potential Build-out and a General Plan Alternative A projection. The Land Use Policy Map Maximum Potential Build-out is a capacity analysis (with no specific build-out time frame) based on the County's General Plan land use and density policies. The General Plan Alternative A provides current projections of population, households and employment from 2000 to 2030 based on an analysis of historic and expected growth trends. The historic and expected growth trends for population take into account the influx of new residents and shifts from part-time residents to full-time residents. The comparison of the 2000-2030 projections to the maximum potential build-out provides a method for testing the projected growth against ultimate build-out. The projection and maximum potential build-out can be used to assess land use policies, existing infrastructure capacity and the need for additional infrastructure particularly for roads, water and sewer facilities.

The General Plan Alternative A projection is based on the assumption that the Lake Arrowhead Community plan area will continue to grow. This would provide a population of 21,940 people by the year 2030. The Maximum Land Use Policy Map Build-out assumes a maximum population of 57,340 based on the Land Use Policy Map. The number of households is projected to reach 8,177 by the year 2030. The Maximum Land Use Policy Map Build-Out assumes a maximum of 22,054 households based on the Land Use Policy Map. These numbers imply that the plan area will reach 37 and 38 percent of its potential household and population capacity by the year 2030.

**Table 3: Population, Households and Employment Projection 2000-2030**

	1990	2000	Projection 2030	Average Annual Growth Rate: 1990-2000	Average Annual Growth Rate: 2000-2030	Maximum Policy Map Build-Out	Ratio of 2030 Projection to Land Use Policy Plan Build-out
<b>Population</b>							
General Plan Alternative A	7,736	11,287	21,940	3.8%	2.2%	57,340	0.38
<b>Households</b>							
General Plan Alternative A	2,677	4,037	8,177	4.2%	2.4%	22,054	0.37
	1991	2002					
<b>Employment</b>							
General Plan Alternative A	2,728	3,068	5,438	1.1%	2.1%	[to be completed]	[to be completed]

Source: Stanley R. Hoffman Associates, Inc. 2-17-05

Note: The population estimates for 1990 and 2000 were based on the U.S. Census. The employment estimates for 1991 and 2002 were based on data from the EDD (Employment Development Department).

## 2.2 GOALS AND POLICIES

**Goal LA/LU 1. Retain the existing resort oriented mountain character of the community.**

### Policies

- LA/LU 1.1 Require strict adherence to the land use policy map unless proposed changes are clearly demonstrated to be consistent with the community character.
- LA/LU 1.2 In recognition of the communities' desire to preserve the rural character and protect the area's natural resources, projects that propose to increase the density of residential land uses or provide additional commercial land use districts or zones within the plan area should only be considered if the following findings can be made:
- A. That the change will be consistent with the community character. In determining consistency the entire General Plan and all elements of the Community Plan shall be reviewed.
  - B. That the change is compatible with surrounding uses, and will provide for a logical transition in the plan area's development. One way to accomplish this is to incorporate planned development concepts in the design of projects proposed in the area.
  - C. That the change shall not degrade the level of services provided in the area, and that there is adequate infrastructure to serve the additional development that could occur as a result of the change. Densities should not be increased unless there are existing or assured services and infrastructure, including but not limited to water, wastewater, circulation, police, and fire, to accommodate the increased densities.
- LA/LU 1.3 Regulate the density of development in sloping hillside areas in order to reduce fire hazards, prevent erosion, and to preserve existing vegetation and the visual qualities of the plan area. One method this can be accomplished by is requiring adherence to the following hillside development standards required by the Fire Safety Overlay District:
- A. Residential density: the density of development for any tentative parcel map or tentative tract map in sloping hillside areas shall be in accordance with the following criteria:
    - i. One to four (1-4) dwelling units per gross acre on slopes of zero to less than fifteen percent (0 - <15%)
    - ii. Two (2) dwelling units per gross acre on slopes of fifteen to less than thirty percent (15 - <30%)
    - iii. One (1) dwelling unit per three (3) gross acres on slopes of greater than thirty percent (30%) gradient
  - B. When twenty-five percent (25%) or more of a subdivision project site involving five (5) or more lots is located on natural slopes greater than thirty percent (30%), the subdivision application shall be submitted concurrently with a Planned Development application to evaluate appropriate project design in consideration of topographic limitations of the site. This provision shall not apply if all of the areas on the site with natural ungraded slopes over thirty percent (30%) are permanently restricted from structural development.

## LAND USE

- LA/LU 1.4 Prohibit construction of new high density residential development along the shore of Lake Arrowhead and Grass Valley Lake in order to protect the scenic qualities. No additional RM districts or zones shall be permitted in the following areas:
- A. Grass Valley Lake: between the shoreline and Golf Course Road north of Lake Arrowhead Country Club, Brentwood Drive north of Riviera Drive and Cumberland (beyond the Blueridge Development Project).
  - B. Lake Arrowhead: generally between the shoreline and North Shore Road.
  - C. Twin Peaks: along State Highway 189.
- LA/LU 1.5 Establish locational criteria for future Multiple Family Residential (RM) districts or zones to areas that are:
- A. In close proximity to commercial areas;
  - B. Adjacent to a mountain secondary or greater width roadway;
  - C. Where adequate circulation exists;
  - D. Where services are available or assured;
  - E. Where average slopes are relatively flat,
  - F. Where compliance with fires safety standards can be met.

**Goal LA/LU 2. Ensure that commercial and industrial development is compatible with the forest and mountain character and meets the needs of local residents and visitors.**

### Policies

- LA/LU 2.1 The County, in coordination with the community, shall develop site design standards for commercial development within the plan area to ensure that architectural detailing and signage are compatible with the mountain character of the community, to ensure that sites are designed to be more pedestrian-friendly, and to provide adequate parking and buffers between commercial and adjacent residential uses.
- LA/LU 2.2 Commercial recreation and tourist facilities should be located, designed, and controlled to protect the residential-recreation character of the area. This can be accomplished by:
- A. Limiting commercial tourist facilities to Lake Arrowhead Village, Blue Jay and Cedar Glen along State Highway 18.
- LA/LU 2.3 Neighborhood commercial uses shall be buffered from adjacent residential uses through transitional land uses and/or design features such as enhanced setbacks and landscaping and/or other screening materials.
- LA/LU 2.4 Minimize strip commercial development by encouraging the expansion of commercial uses within existing core commercial nodes.
- LA/LU 2.5 All new commercial sites, through the Planning Department site approval process, shall be reviewed to ensure that the site is large enough to accommodate required parking and access.



## LAND USE

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- LA/LU 2.6 All architecture and outside facades of commercial structures shall be in keeping with the mountain character. Natural woods and masonry shall be used as much as practicable, and shall be reviewed for conformance during the Planning Department site approval process.
- LA/LU 2.7 Industrial land uses shall be located in areas where industrial uses will best serve the needs of the community, and will have a minimum adverse effect upon surrounding property with minimal disturbance to the mountain environment and the total community.
- LA/LU 2.8 Limit future industrial development to that which is necessary to meet the service, employment and support needs of local residents, and does not adversely impact the mountain environment. This can be accomplished by:
- A. Fully screen all open storage activities with fencing and indigenous-landscaping, limit open storage to the rear 75% of any parcel.
  - B. Require the architecture and appearance of all buildings to be compatible with the mountain character; natural wood and masonry shall be used.
- LA/LU 2.9 New industrial uses which generate heavy truck traffic shall only be allowed in appropriately zoned areas located off of State Highway 18.

## LAND USE

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# 3 CIRCULATION AND INFRASTRUCTURE

## LA3.1 INTRODUCTION

The quality of life and the mountain character of the community are dependent on the services that are provided. Residents in Lake Arrowhead expect that services such as schools, water and sewer, roads, fire and police protection, and park and recreation facilities are provided at levels that meet their needs. At the same time, it is understood that acceptable levels of service should be provided in accordance with the small-town character that is desired. Provisions of services in Lake Arrowhead should be commensurate with the mountain lifestyle and residential-recreational character of development. The impact of land development on services must be managed to ensure a balance between providing for population growth and preserving the character of the community.

## LA3.2 CIRCULATION – INTRODUCTION

### A. Roadway System

One of the overriding goals expressed by residents of Lake Arrowhead is to maintain the mountain character of the community. The character of the community can be significantly impacted by roads and the traffic generated from the region and the community.

The existing street system in Lake Arrowhead is characterized by a combination of state highways and local roadways (See Figure 3-1, Circulation Map).

Rim of the World Highway (SR-18) is a two-lane mountain major highway that provides access to the Mountain Region from both the Valley Region to the south and the Desert Region to the north. In the Valley Region, SR-18 originates as an interchange with SR-30, as Waterman Avenue in the city of San Bernardino. After passing through the communities of Lake Arrowhead, Running Springs, Arrowbear Lake and Big Bear Lake, it continues northeasterly into the Desert Region and through communities such as Lucerne Valley, Apple Valley and Victorville before terminating at its northern junction with SR-138 just west of the Los Angeles County Line. This roadway operates as the primary access for the Lake Arrowhead communities and other mountain communities such as Crestline and Big Bear Lake. It is considered to function as a mountain major highway under San Bernardino County roadway classification standards.

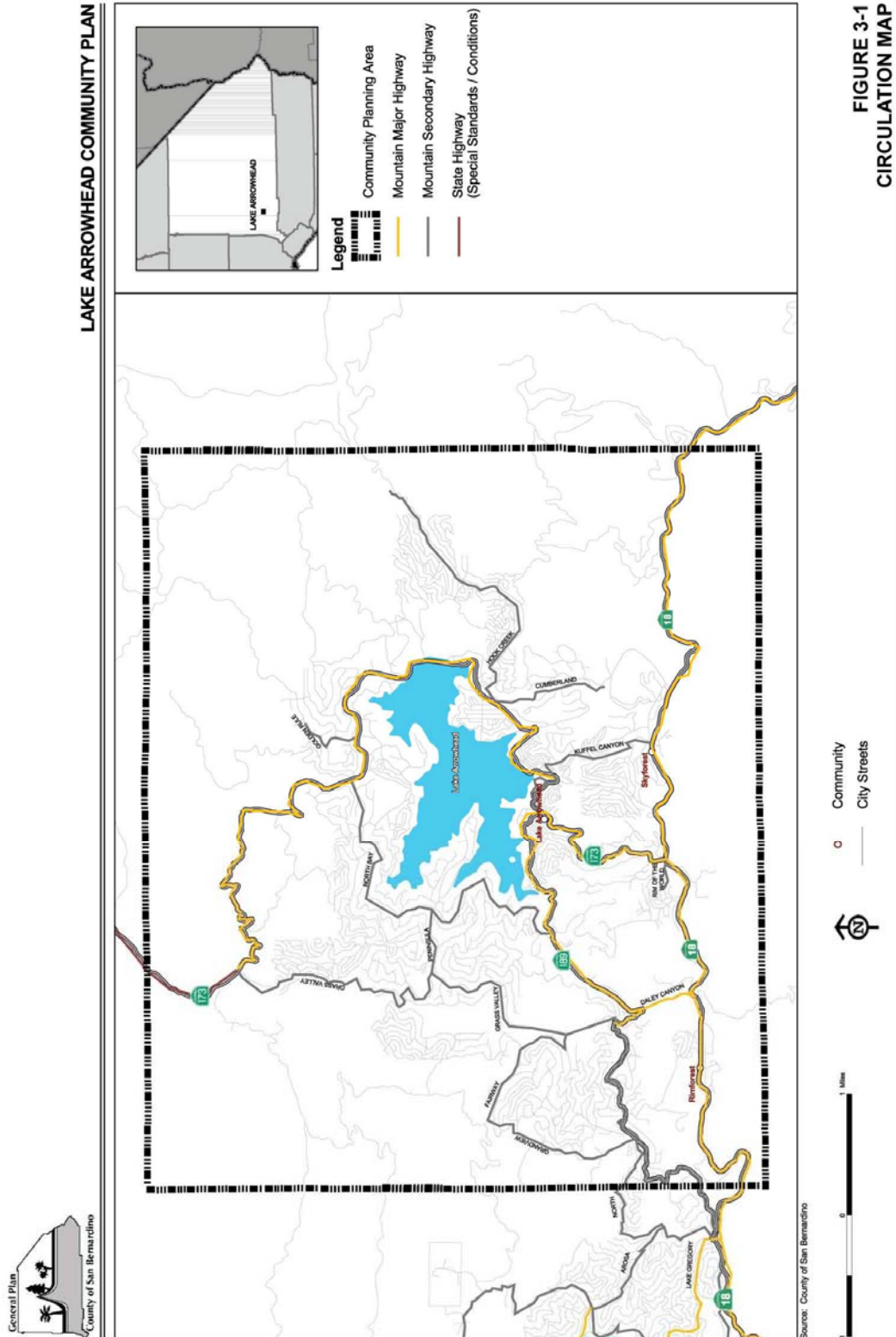
State Route 173 (SR-173) is a two-lane mountain major highway that extends north from Rim of the World Highway (SR-18) and continues counterclockwise around Lake Arrowhead before terminating at SR-138 just northwest of Silverwood Lake. It has been classified as a mountain major highway by San Bernardino County. The portion of roadway between Willow Creek Jeep Trail and Pacific Crest National Scenic Trail is unpaved.

## CIRCULATION AND INFRASTRUCTURE

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# CIRCULATION AND INFRASTRUCTURE



## CIRCULATION AND INFRASTRUCTURE

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State Route 189 (SR-189) is a two-lane mountain major highway that splits from Rim of the World Highway (SR-18) and continues east until it terminates at a junction with SR-173. The portion of this roadway between Blue Jay Cutoff and SR-173 has been classified as a mountain major highway by San Bernardino County. The segment between Rim of the World Highway (SR-18) and Blue Jay Cutoff is classified as a mountain secondary highway. This facility provides access to residential properties in the Twin Peaks and Blue Jay communities.

Cumberland Drive extends southward from Hook Creek Road, just south of SR-173, to Blue Ridge Drive. It currently has one lane in each direction and is classified as a mountain secondary highway under San Bernardino County standards..

Daley Canyon Road is a two-lane mountain major highway that extends northward from SR-18 for one-half mile to its intersection with SR-189. This facility provides an important north-south connection between these two state highways.

Fairway Drive is a two-lane mountain secondary highway that extends from Augusta Drive north and east to Club House Drive, just west of Grass Valley Road.

Golden Rule Lane is a two-lane facility which extends northward from SR-173 to Manitoba Drive and is classified as a mountain secondary highway.

Grandview Drive is a two-lane mountain secondary highway that begins at Fairway Drive and travels southward to North Road.

Grass Valley Road is a two-lane mountain secondary highway which extends northward from its intersection with SR-189 in the community of Twin Peaks and travels approximately four and one-half miles through the community of Blue Jay before terminating at an intersection with SR-173.

Hook Creek Road is a two-lane mountain secondary highway that begins at an intersection with SR-173 and extends two miles northeast to Poplar Lane. This facility operates as the primary access to the community of Cedar Glen. Kuffel Canyon Road is a two-lane secondary arterial which originates at an intersection with Rim of the World Highway (SR-18) and extends north one and one-quarter miles to SR-173. This facility is a major thoroughfare in the community of Lake Arrowhead.

Kuffel Canyon Road is a two-lane mountain secondary highway that originates an intersection with Rim of the World Highway (SR-18) and extends north one and one-quarter miles to SR-173. This facility is a major thoroughfare in the community of Lake Arrowhead.

North Bay Road is a two-lane primary arterial which extends from SR-189 approximately three and one-half miles north and east before terminating at SR-173. This facility provides access to residents living along the western and northern shores of Lake Arrowhead.

North Road is a two-lane mountain secondary highway that extends from SR-189 approximately three and one-half miles north and east before terminating at SR-173. This facility provides access to residents living along the western and northern shores of Lake Arrowhead.

Peninsula Drive is a two-lane mountain secondary highway that extends eastward for one-half mile and provides a connection between Grass Valley Road and North Bay Road.

Rim of the World Drive extends eastward from Burnt Mill Road to SR-173, just north of Rim of the World Highway (SR-18). It currently consists of two lanes and has been classified as a mountain secondary highway.

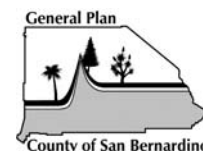
The Lake Arrowhead plan area relies on SR-18, SR-173, and SR-189 for access to the mountain from the Valley and Desert Regions and within and to the neighboring mountain communities. These highways not only accommodate traffic from the local population but from the visitors who travel to the mountains on weekends and during the busy holiday season. Identifying and implementing future improvements will be a challenge that will have to address: a) a lack of local control over state-highway improvements, b) improvements that may be in conflict with the community's desire to maintain the area's scenic and natural resources and mountain character and c) environmental constraints that will limit the feasibility of certain improvements to the road system.

During meetings held by the County, residents emphasized their concerns with traffic circulation on both state highways and other major county roads within their community. They emphasized the need for improvements to the circulation system to be compatible with the community's goal of maintaining the area's character and scenic and natural resources.

The operating condition of the roadway system within the plan area was examined in terms of congestion and delay. Table 4 provides the Existing 2004 and Future 2030 roadway operating conditions for the Lake Arrowhead Community Plan area. The operating conditions include: Average Daily Trips (ADT) data, Volume to Capacity (V/C) ratios and Level of Service (LOS) data. The Average Daily Trips (ADT) data was provided by the County Public Works Department. Most of the trips data was collected within the past one to two years. The Volume to Capacity (V/C) ratio was calculated using the traffic counts (or ADT) and is a standard tool for describing the typical operating conditions of a roadway. The Level of Service data is based on the V/C ratio and helps to categorize and describe the degree of congestion on the roadways.



## CIRCULATION AND INFRASTRUCTURE



**Table 4: Existing and Future Roadway Operating Conditions**

Major Roadways							
Traffic Count / Volume to Capacity / Level of Service							
Facility	Begin-End	Existing 2004 Operating Condition			Future 2030 Operating Conditions		
		ADT	V/C	LOS	ADT	V/C	LOS
Cumberland Drive	Hook Creek Rd – Blue Ridge Dr	1,350	0.117	A			
Daley Canyon Rd	SR-189 – SR-18	7,650	0.665	C			
Fairway Drive	August Dr – Club House Dr	4,450	0.387	B			
Golden Rule Lane	SR-173 – Manitoba Dr	1,300	0.113	A			
Grandview Drive	North Rd – Augusta Dr	2,400	0.209	A			
Grass Valley Road	SR-173 – Jagerhorn Dr	1,100	0.096	A			
	Jagerhorn Dr – Peninsula Dr	4,000	0.348	A			
	Peninsula Dr- Club House Dr	4,700	0.409	B			
	Club House Dr – Blue Jay Cutoff	7,200	0.626	C			
	Blue Jay Cutoff – SR-189	9,000	0.783	D			
Hook Creek Road	SR-173 – Pineridge Dr	5,100	0.443	B			
	Pineridge Dr - Poplar Ln	600	0.052	A			
Kuffel Canyon Rd	SR-173 – SR-18	2,850	0.248	A			
North Road	Arosa Dr – SR-189	3,550	0.309	A			
North Bay Road	SR-173 – Peninsula Dr	4,700	0.409	B			
	Peninsula Dr – Cottonwood Ln	5,850	0.509	B			
	Cottonwood Ln - SR-173	9,000	0.783	D			
Peninsula Drive	Grass Valley Rd – North Bay Rd	3,800	0.330	A			
Rim of the World Dr	Burnt Mill Rd – SR-173	400	0.035	A			
<b>State Highways</b>							
Rim of the World Highway (SR-18)	SR-189 – Daley Canyon Rd	10,700	0.930	E			
	Daley Canyon Rd – SR-173	10,200	0.887	E			
	SR-173 – Kuffel Canyon Rd	8,200	0.713	D			
	Kuffel Canyon Rd – SR-330	6,800	0.591	C			
SR-173	Grass Valley Rd –North Bay Rd	600	0.052	A			
	North Bay Rd – Hook Creek Rd	4,200	0.365	B			
	Hook Creek Rd – Kuffel Cyn Rd	6,300	0.548	C			
	Kuffel Cyn Rd-SR-189	8,500	0.739	D			
	SR-189 – SR-18	5,300	0.461	B			
SR-189	SR-18 – Bear Springs Rd	3,500	0.304	A			
	Bear Springs Rd–Grass Valley Rd	5,000	0.435	B			
	Grass Valley Rd – SR-173	6,600	0.574	C			

Source: Myers, Mohaddes Associates, March 2005

According to Table 4, on a daily basis, most roadways within the plan area are operating at acceptable levels of service. Most roads are operating at a level of service A, B or C. A level of service A is described as a free flow- low volume traffic condition with little or no delays. Levels of service B and C are described as stable flow traffic conditions with relatively low volumes and acceptable delays experienced throughout the day. Roadways with levels of service B and C may also experience some

peak hour congestion. Segments of Grass Valley Road and North Bay Rd are not operating at acceptable levels of service. Grass Valley Road between Blue Jay Cutoff and SR-189 and North Bay Rd between Cottonwood Ln and SR-173 are operating at a level of service D, which is described as approaching unstable flow with poor, yet tolerable delays experienced throughout the day. During peak hours significant congestion and delays may be experienced.

Most segments of Rim of the World Highway (SR-18) are not operating at acceptable levels of service. Two of the four segments are operating at a level of service E, which is described as unstable flow with heavy congestion and delays experienced throughout the day and during peak hours. Traffic volumes are at or near capacity. One segment of SR-173 between Kuffel Canyon Rd and SR-189 is also operating at a level of service E.

Future 2030 conditions for the Lake Arrowhead Community Plan Area indicate that major County roads and State Highways within the plan area are projected to operate at levels of service **X**. **[2030 projection analysis to be completed once data is received from MMA]**

Since the LOS data provided in this analysis were based on ADT volumes they represent the “average” LOS at which the facility generally operates throughout the day. When peak-hour volumes are utilized, these scores are expected to worsen, as demonstrated under the Congestion Management Program methodology shown in the following section.

#### B. Congestion Management Program

Within San Bernardino County, San Bernardino Associated Governments (SANBAG) is designated as the Congestion Management Agency (CMA). Through this program SANBAG can monitor regional transportation facilities and catalog their daily operating levels of service in an effort to identify existing travel patterns and better plan for future transportation improvements in response to shifting travel patterns. Rim of the World Highway (SR-18), SR-173 and SR-189 are roadways that have been designated as CMP facilities. As determined in the 2001 update, the operation levels of services for these facilities are shown in Table 6. The Levels of Service (LOS) for the CMP facilities reflect a peak period measurement.

**Table 5: CMP Facility Levels of Service**

Facility	No. of Lanes	Two-Way Volume (ADT)	Level of Service (LOS)
<b>SR-18</b>			
Jct. Rte 138-Rte 189	2	9,000	E
Jct. Rte 189 – Rte 330	2	8,400	E
<b>SR-173</b>			
Lake Arrowhead Rd. – Hook Creek Rd.	2	1,100	B
Hook Creek Rd. – Jct. Rte 18	2	5,300	E
<b>SR-189</b>			
Jct. Rte 18 – Jct. Rte 173	2	4,700	D

## C. Pedestrian and Bicycle Circulation and Off-Street Parking

The current circulation system within the plan area does not safely and efficiently accommodate pedestrian and bicycle traffic. Many of the roads in the Lake Arrowhead area are narrow and lack enough visibility to safely accommodate non-motorized traffic. During the winter this problem is compounded by snow. Snow piled along the roadways or in parking lots, reduces traffic capacity, available parking and non-motorized traffic circulation. Residents and visitors often park on the roads, which hinders snow removal and creates further difficulties for pedestrian and bicycle circulation.

## D. Scenic Routes

Scenic highways play an important role in the preservation and protection of environmental assets. County Scenic Route designation recognizes the value of protecting scenic resources for future generations, and places restrictions on adjacent development including specific sign standards regarding sign placement and dimensions, utility placement, architectural design, grading, landscaping characteristics, and vegetation removal. The following streets are designated as scenic routes by the General Plan and are subject to the Scenic Resources Overlay District: Kuffel Canyon Road, Grass Valley Road, Rim of the World Highway (SR-18) and SR-173. In addition, both state highways, SR-173 and SR-18, are eligible for designation as scenic routes by the State but have not been officially designated. The advantages of official designation are a positive image for the communities involved, preservation and protection of environmental assets and potential increase in tourism.

## LA3.3 GOALS AND POLICIES - CIRCULATION

### CIRCULATION

<b>Goal LA/CI 1.</b>	<b>Ensure a safe and effective transportation system that provides adequate traffic movement while preserving the mountain character.</b>
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### Policies

- |           |   |
|-----------|---|
| LA/CI 1.1 | The County shall ensure that all new development proposals do not degrade Levels of Service (LOS) on State Routes and Major Arterials below LOS C during non-peak hours or below LOS E during peak-hours. <b>[countywide/regional policy] [This policy will need to be adjusted to reflect any modifications to the County's standard LOS]</b>  |
| LA/CI 1.2 | The County shall require a traffic impact analysis report to identify impacts and mitigation measures for projects that may result in potentially significant impacts and limit new construction which would require significant improvements to the existing road system in order to handle project ingress, egress and traffic volumes until such time that the required improvements are completed. Significant improvements include anything other than additional turn lanes, transition lanes and stop signs. |
| LA/CI 1.3 | Work with local and state agencies to ensure that transportation system improvements are made to SR-18, SR-173, Grass Valley Road and North Bay Road where transportation facilities are operating at or near full capacity. The County and state agencies shall identify existing and future deficiencies, such as the need for alternate routes, widening existing roads, providing turn lanes, and considering weekend traffic volumes in traffic analysis.  |

## CIRCULATION AND INFRASTRUCTURE

- LA/CI 1.4 Minimize the traffic load on SR-18, SR-173, and SR-179 by requiring projects to minimize direct access to these main circulation roads, and encourage shared driveways for industrial and commercial uses on adjacent properties to promote use of the main circulation roads as throughways.
- LA/CI 1.5 Protect rights-of-way for mountain highways shown on the circulation portion of the County General Plan. The Public Works department shall require dedications as entitlements are given.
- LA/CI 1.6 Design roads to follow natural contours, avoid grid pattern streets, minimize cuts and fills and disturbance of natural resources and trees wherever possible.
- LA/CI 1.7 Provide access control, traffic system management and other improvements on the roadway system within the plan area in keeping with the scenic sensitivity of the community plan area. One method this can be accomplished by is, to the maximum extent possible, use alternatives to the construction of new traffic signals where they can be shown to benefit roadway capacity and are compatible with the mountain character of the community.
- LA/CI 1.8 Preservation and protection of sensitive habitats shall have priority over road location, relocation or realignment, when other practical alternatives are available.  
**[COUNTYWIDE/REGIONAL POLICY]**
- LA/CI 1.9 Design road sections for mountain roads to be flexible in terms of required right of way widths and roadway widths, however existing two-lane roads should be maintained. Road widenings should be limited to safety type improvements and those that would facilitate flow such as turning lanes, passing lanes, intersection widenings and shoulder widenings.
- LA/CI 1.10 Complete Cumberland Road from Cedar Glen to State Highway 18 near Santa's Village as a condition of development of the adjacent area and ensure protection of the character of the surrounding area by the following:
- A. Require that Cumberland Road be designated as a County Scenic Route.
  - B. Require that Cumberland Road be used primarily for residential and emergency traffic.
  - C. Prohibit trucks that exceed 5 tons and vehicles pulling large trailers.
- LA/CI 1.11 Preserve the status of Kuffel Canyon, Grass Valley Road, SR-173 and SR-18 as County scenic routes, and ensure protection of their natural features through the following methods:
- A. Require compliance with the provisions of the Scenic Resources Overlay District.
  - B. Support hillside preservation regulations that will include standards for hillside development to control densities, allowable cut and fill heights, soil and slope stability, grading and blending of contours, structural relationships, building foundations, and the like.
- LA/CI 1.12 Seek State support and assistance for the designation of State Highways 18 and 173 as official State Scenic Routes.

## CIRCULATION AND INFRASTRUCTURE



<b>Goal LA/CI 2.</b>	<b>Protect the designed vehicular capacity of all mountain roads.</b>
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### Policies

- LLA/CI 2.1 Prohibit on-street parking where it reduces highway design capacity and limits snow plowing effectiveness.
- LA/CI 2.2 Control access onto all State highways and County mountain secondary highways.
- LA/CI 2.3 The County shall limit and control the location and extent of all land uses which generate increased levels of traffic beyond the designed capacity of the existing and planned highways.

<b>Goal LA/CI 3.</b>	<b>Ensure safe and efficient non-motorized traffic circulation within the community.</b>
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### Policies

- LA/CI 3.1 The County shall research the feasibility of using excess right-of-way not needed for road construction for bicycle and pedestrian trails. Priority shall be given to providing trails within the right-of-way (or adjacent to) the following roadways:
- A. Work with Caltrans to establish bicycle trails along one side of State Highways 173 and 189 through the plan area. Encourage connections to trails outside the plan area.
  - B. Provide trails in North Bay Road, Grass Valley Road, Hook Creek Road and Cumberland Road. Encourage connections to local and/or regional trails.
- LA/CI 3.2 Where feasible, establish and coordinate a system of bicycle and pedestrian trails connecting residential areas to recreational facilities, the National Forest and commercial activity centers. Promote safe and attractive pedestrian and bicycle crossings at logical points on the Circulation Element roads and where feasible pursue opportunities to separate pedestrian and bicycle traffic from vehicular traffic particularly along SR-18, SR-173 and SR-189.
- LA/CI 3.3 Where feasible, provide pedestrian improvements in commercial activity centers to enhance safety, provide a high quality visitor experience, enhance the mountain character of the area and reduce the need for vehicular travel.
- LA/CI 3.4 Require school bus stop shelters as needed, when road improvement or widening is required as part of an adjacent development.

<b>Goal LA/CI 4.</b>	<b>Promote alternative modes of transportation.</b>
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### Policies

- LA/CI 4.1 Define the existing and future transportation needs as they may relate to transit for residents, employees and visitors in the mountain region. When transportation needs are defined the Transportation Department shall conduct a feasibility study to determine the feasibility and cost-effectiveness of instituting alternative transportation recommendations.

- LA/CI 4.2 Evaluate additional service needs that could be provided by the Mountain Area Regional Transit Authority (MARTA) through coordination with MARTA and residents of the mountain communities.

## LA3.4 INFRASTRUCTURE - INTRODUCTION

The provision of adequate infrastructure services is essential for maintaining the health and quality of life of a community. The availability of adequate water supplies and wastewater disposal is crucial to supporting population growth. Proper management of the area's water resources is not only important for the purpose of serving existing and projected peak load domestic needs, but is also important for fire protection purposes and sustaining the area's natural resources and wildlife. In addition residents have articulated the importance of ensuring that infrastructure improvements and facilities are compatible with the character of the plan area and natural environment.

### A. Local Water Setting

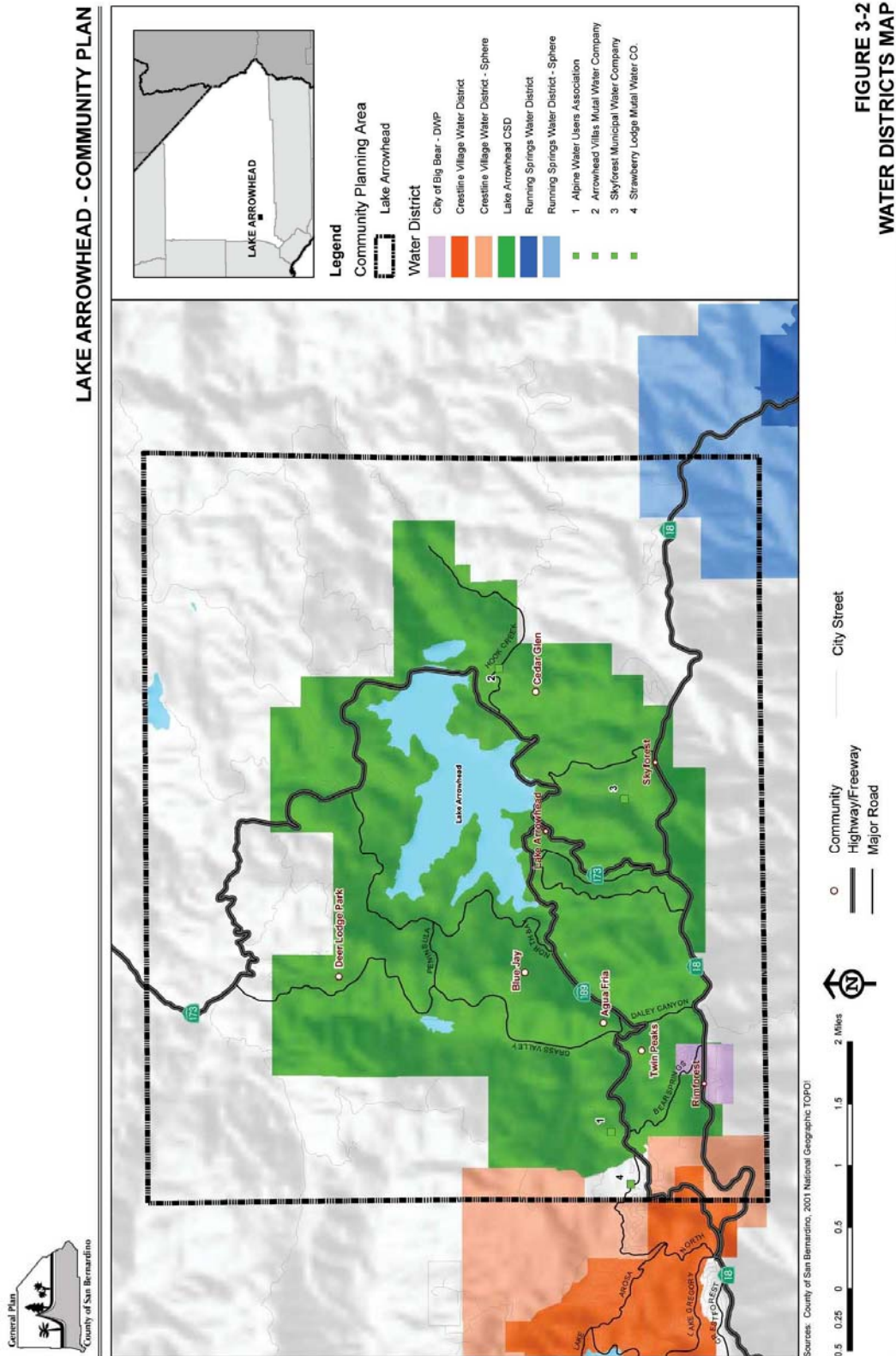
There are six local water suppliers for the Lake Arrowhead community. Alpine Water Users Association, Arrowhead Villas Mutual Water, Lake Arrowhead Community Services District (LACSD), SkyForest Municipal Water District, Strawberry Lodge Mutual Water, and City of Big Bear – Rim Forest supply their specific areas as shown in Figure 3-2, Water Districts.<sup>3</sup> An approximate total of 9,161 service connections are served by these agencies<sup>4</sup>. The water districts and Rim Forest are public purveyors with a total of approximately 8,248 connections. The mutual water companies are private water purveyors with stakeholders and 913 connections<sup>5</sup>. Detailed information regarding future demand, the long-term availability of water, and future projects was not available for the water purveyors within the plan area. However, current infrastructure capacity, based on the estimated number of available connections reported by each of the water purveyors is at approximately 71% of the total available for the plan area.<sup>6</sup> This leaves approximately 29% available for connections within the plan area. General supply and policy information for these suppliers is presented in Table 6.

<sup>3</sup> The sphere areas of Crestline Village Water District and Running Springs Water District overlap the outer corners of the plan area. However they do not provide services within these sphere areas. That portion of Crestline Village Water District located within the plan area does provide service to a very small number of residents. More detailed information pertaining to the entire area served by Crestline Village Water District can be found in the Crest Forest Community Plan.

<sup>4</sup> No reply from Arrowhead Villas Mutual Water or Strawberry Lodge Mutual Water. Based on discussions with other agencies, both of these purveyors service substantial areas (residents) so we will continue to try and acquire additional information from these purveyors.

<sup>5</sup> Ibid

<sup>6</sup> Ibid



## CIRCULATION AND INFRASTRUCTURE

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## CIRCULATION AND INFRASTRUCTURE



**Table 6: Supply and Policy Information of Service Providers**

Service Provider	# of Water Connections	Estimated Population Served	Estimated Annual Water Production	Policies Allow service outside of boundaries	Imported Water Source	Imported Water Source Amount *
Alpine Water Users Association	913	4000	162.1 A.F.	No	CLAWA	80.3 A.F.
Arrowhead Villas Mutual Water	-	-	-	-	-	-
Lake Arrowhead CSD	7,500	12,000	2,672 A.F.	No	SBVMWD ( Future)	1,500 A.F. (Future)
Sky Forest Municipal Water District	148	400	32.2 A.F.	No	CLAWA	23.9 A.F.
Strawberry Lodge Mutual Water	-	-	-	-	-	-
City of Big Bear Rim Forest	600	1,500	163.8 A.F.	No	CLAWA	52-66 A.F.

\* annual estimate

- (1) No reply from Arrowhead Villas Mutual Water or Strawberry Lodge Mutual Water. Based on discussions with other agencies both of these purveyors service substantial areas (residents) so we will continue to try and acquire additional information from these purveyors.

LACSD historically has not acquired water from other sources, however due to approximately six years of drought LACSD has proceeded with the fiscal and legal procedures to begin buying water from the San Bernardino Valley Municipal Water District through the Crestline- Lake Arrowhead Water Authority (CLAWA). The agreement states that over the next 10 to 15 years, approximately 1,500 acre feet of water per year will be purchased by LACSD. The purchased water is used to provide LACSD the time to build other projects that will ultimately reduce the demand on the lake. The ultimate goal is to provide other sources of water so that the lake is no longer the only source of water for this area. The smaller purveyors already purchase some of their water from CLAWA through pipelines that transport water to the area.

CLAWA is a wholesale water purveyor selling water to approximately 25 smaller water purveyors in the area. CLAWA distributes water from the State Water project and pumps the water from Lake Silverwood. CLAWA's boundary area is approximately 50,000 acres from Cedar Pines Park to Green Valley Lake. CLAWA is permitted a maximum 5,800 acre-feet per year from the State Water Project. Reports show that CLAWA used approximately 3,000 acre-feet during what is considered peak year usage during the fires in 2003. With peak year usage at 3000 acre-feet CLAWA utilized 52% of their total water capacity.

There are also some small private purveyors that supply a limited area including: Arrowhead Manor Water Company (Cedar Glen)<sup>7</sup>, Arrowhead Pines Rose Cabins, Arrowhead Springs (Campus Crusade camp), Green Valley Campground, Lake Arrowhead Country Club, Alpine Conference Center, Rim of the World USD. Those residents who live outside of a water district boundary, have their own on-site methods such as wells or springs, that are recharged annually by winter snows and rains. The yield from these sources will vary dependant on the amount of snowmelt and rainfall.

**B. Regional Water Setting**

The Lake Arrowhead Planning area is located in the San Bernardino Mountains, where there are no true aquifers, but there are subsurface water sources from snow pack and rain, which percolate into the crystalline rocks. Groundwater in this planning area is found primarily in the unconsolidated alluvial deposits found in localized canyons and slopes. Wells are usually placed into the crystalline granitic rock in order to draw on long-term water supplies. Depending on the size of the localized water purveyor, wells can provide between 32 and 2,672 acre-feet of water per year. Most water quality in this area is good.

**C. Wastewater**

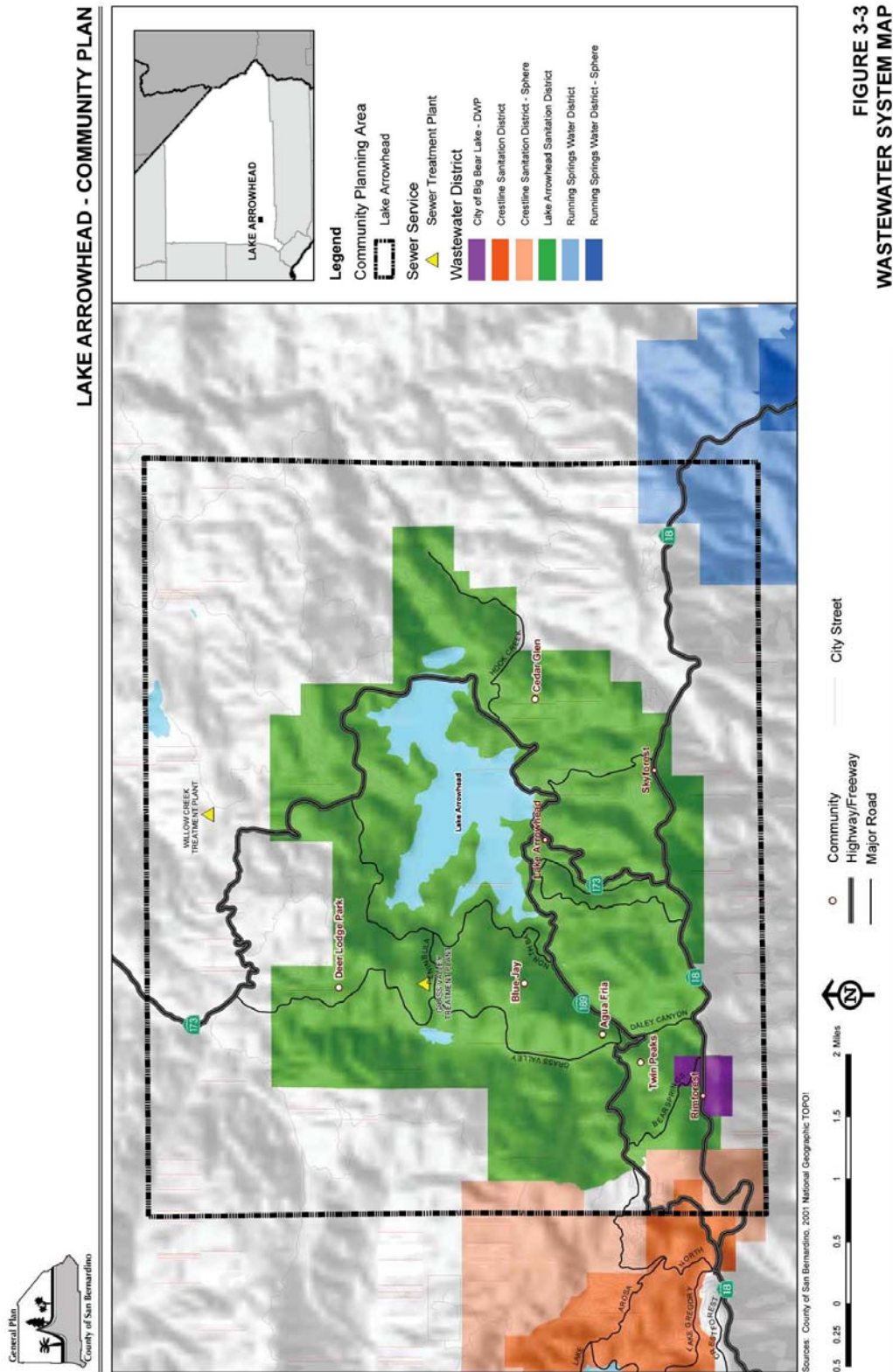
Most of the Lake Arrowhead community area is serviced by the Lake Arrowhead CSD (LACSD)<sup>8</sup>. (See Figure 3-3, Wastewater System Map). However, there are also isolated sites that have been developed with septic tanks and leachfield systems. Approximately 90% of the area is on-line, while there remains about 10% that is exempt. Sewage is collected by the District and treated based on two drainage basin areas – the Lake Arrowhead Basin and the Grass Valley Basin. There are two wastewater treatment plants – Willow Creek and Grass Valley Wastewater treatment plants. Treated effluent is transported from the Willow Creek plant to the Grass Valley plant for transport and disposal through a 10 mile outfall down the mountain to a percolation site near Hesperia.<sup>9</sup> The LACSD typically treats an average of 1.35 mg of domestic wastewater per day. On holiday weekends, the flow increases to an average of 3.0 mg. Maximum wet weather flows have been recorded at 8.5 mg per day due to infiltration.<sup>10</sup> The high peak flows are managed through operational mechanisms to control treatment plant volumes. Based on information from the District, the system has a total future capacity of 3.6 million gallons per day and is currently at 38% of this design capacity for average daily use. Based on rough information concerning the number of available connections, approximately 70% of the available sewer connections have been used, with 30% remaining. Table 7 provides existing and future flow information for LACSD.

<sup>7</sup> Has been taken over by the Public Utilities Commission

<sup>8</sup> City of Big Bear Lake has limited transmission lines that run through the plan area but they do not provide services to the plan area. The sphere areas of Crestline Village Sanitation District and Running Springs Water District overlap the outer corners of the plan area. However they do not provide wastewater services within these sphere areas. That portion of Crestline Village Sanitation District located within the plan area does provide service to a very small number of residents. More detailed information pertaining to the entire area served by Crestline Village Sanitation District can be found in the Crest Forest Community Plan.

<sup>9</sup> Lahontan Regional Water Board, Southern Basin, Basin Plan (10/94)

<sup>10</sup> Lake Arrowhead Community Services District Water Master Plan Update, Alternative Water Supply Analysis, April 2002 and direct correspondence with LACSD



## CIRCULATION AND INFRASTRUCTURE

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## CIRCULATION AND INFRASTRUCTURE



**Table 7: Waste Water Agencies/Districts**

<b>Wastewater Treatment Provider</b>	<b>Population Served in area</b>	<b>Existing Flow (mgd)</b>	<b>Existing Design Flow (mgd)</b>	<b>Future Design Flow (mgd)</b>	<b>Permitted Design Flow (mgd)</b>
LACSD	10,639	1.35 (average) 3.0 (holidays)	2.5	3.5	2.5

### LA3.5 GOALS AND POLICIES - INFRASTRUCTURE

<b>Goal LA/CI 5.</b>	<b>Ensure adequate water sources and associated infrastructure to serve the needs of existing and future water users in the Lake Arrowhead Community Plan area.</b>
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#### **Policies**

- LA/CI 5.1 Through the development review process, permit new development only when adequate water supply is existing or can be assured.
- LA/CI 5.2 Support efforts to continue and improve cooperation and communication among water providers and the County in addressing water related issues.
- HT/CI 5.3 Support conjunctive use (operating water resources under a common management) of the area's water supplies.
- HT/CI 5.4 Support programs to use reclaimed water from mountain sewage systems to augment local water supplies when such reclamation is consistent with public health and environmental standards.

<b>Goal LA/CI 6.</b>	<b>Encourage and promote water conservation.</b>
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#### **Policies**

- LA/CI 6.1 Support conservation and efficient water use in an effort to minimize the need for new water sources.
- LA/CI 6.2 The County, in coordination with local water providers, shall provide education for voluntary water conservation. Plan and implement educational programs and events promoting water conservation.
- LA/CI 6.3 Promote the use of native low water use vegetation, especially drought tolerant plants in landscaping and discourage inappropriate use of vegetation unsuited to the mountain climate.
- LA/CI 6.4 Minimize the use of turf grass.

LA/CI 6.5 Promote use of water efficient irrigation practices for all landscaped areas.

**Goal LA/CI 7. Ensure that infrastructure improvements are visually and physically compatible with the natural environment and mountain character of the community.**

### Policies

- LA/CI 7.1 The County shall work with USFS to ensure that improvements or development of infrastructure facilities adjacent to the National Forest are non-invasive and do not adversely affect the natural environment.
- LA/CI 7.2 Mitigate the visual impacts of facilities, structures, utilities and mechanical installations through the development of appropriate screening and location criteria.
- LA/CI 7.3 Coordinate with service providers to relocate existing overhead utilities underground along existing roadways and require underground utilities in new developments.

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## 4 HOUSING

[See the Housing Element of the General Plan]

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## 5 NOISE

[See the Noise Element of the General Plan]

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## 6 OPEN SPACE

### LA6.1 INTRODUCTION

The natural setting, which includes open space, recreational areas, and natural resources, is the contributing factor to the mountain character of the Lake Arrowhead Community plan area. The area's natural features including lakes, streams, vegetation, wildlife, topography and rock formations are regional assets that are highly valued by residents of the area and by visitors. Much of the local economy is based on the attraction of these natural resources. Preservation of the area's natural resources and enhancement of the area's recreational resources are important issues articulated by residents of the Lake Arrowhead community, and will be increasingly important as population growth increases the amount of development and recreational demands in the area.

#### A. Recreation and Parks

The Lake Arrowhead Communities are completely surrounded by the San Bernardino National Forest. Approximately 47 percent of the land within the Lake Arrowhead Community Plan boundary is National Forest. The Lake Arrowhead Community Plan area contains a number of campgrounds and organization camps, hiking trails, and lake all of which draw tourism to the area in the winter and summer months. Residents are highly protective of their forest environment and are concerned with management of forest service lands in and around their communities. Residents are most concerned with preserving the current National Forest boundary and would only consider changes where additional lands could be acquired by USFS for open space preservation.

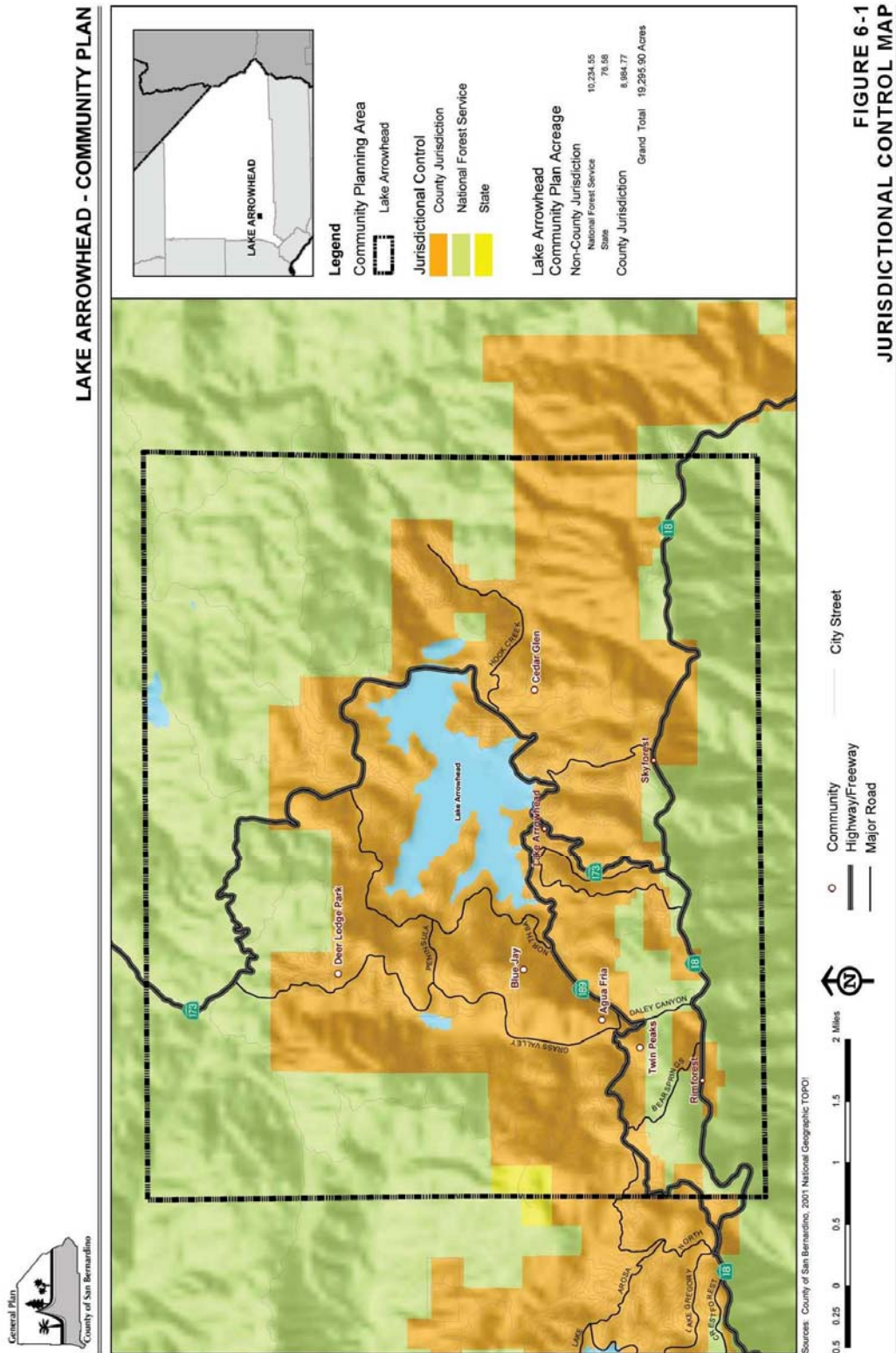
Even with the 9720 acres of national forest lands within the Lake Arrowhead Community Plan area, residents have expressed a need for additional neighborhood parks with active recreation facilities for youth. Residents have expressed a desire for additional parks and recreational facilities. As the permanent population continues to increase there will be a greater demand for recreation opportunities and services. Residents are particularly concerned that there are currently not enough recreational facilities to support the needs of youth and seniors within their communities.

The responsibility of open space preservation and management of recreation areas within the plan area is unique in that it requires coordination and cooperation between the County, the United States Forest Service and the community. (See Figure 6-1, Jurisdictional Control Map).

#### B. Trails

The Lake Arrowhead Community Plan Area contains several trails and forest roads that are utilized as recreational facilities and help with forest maintenance and fire safety by providing access to less developed backcountry regions. The United States Forest Service (USFS), through its Regional Forester office located in San Bernardino, is responsible for maintaining a vast majority of these facilities. Figure 6-2 shows the location and jurisdictional rights of the trails within the Lake Arrowhead Community plan area. Residents have expressed a desire for a non-motorized multi-use trail system within their community which would connect recreational areas, the forest, residential areas and commercial nodes.

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Figure 6-2, Trails Map

## OPEN SPACE

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## LA6.2 GOALS AND POLICIES

<b>Goal LA/OS 1.</b>	<b>Ensure the preservation and proper management of National Forest lands within the Lake Arrowhead Community plan area.</b>
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### Policies

- LA/OS 1.1 Encourage the exchange of properties between the Forest Service and private property owners to create better Forest Service boundary management.
- LA/OS 1.2 The County shall work with USFS to designate areas for Off Highway Vehicle use and establish programs for Off Highway Vehicle use education.
- LA/OS 1.3 The County shall work with USFS to explore land exchange opportunities that would provide additional areas for open space and recreational opportunities.
- LA/OS 1.4 The County shall assign an appropriate land use district or zone to available exchange lands.

<b>Goal LA/OS 2.</b>	<b>Develop parks, recreation facilities and a trail system to meet the recreational needs of the community.</b>
----------------------	---

### Policies

- LA/OS 2.1 Establish a plan for the development of a pedestrian/equestrian/bicycle trail system within the plan area. The plan shall incorporate the following recommendations:
- A. Where feasible pursue opportunities to separate pedestrian/bicycle/equestrian traffic from motorized vehicle traffic.
  - B. Provide trail heads that link regional trails, the forest and forest service trails, recreational areas, residential areas, neighborhood trail systems and commercial nodes.
- LA/OS 2.2 If an approved trails plan is developed require dedication of trail easements as a condition of approval for all development projects consisting of 5 or more residential lots. The trail easement shall allow unobstructed trail access and provide connections to off-site trails.
- LA/OS 2.3 Review site plans to determine if residential and commercial uses are designed for pedestrian use. Future developments shall contain an internal system linking residential areas, recreational facilities, the National Forest and commercial activity centers.
- LA/CI 2.4 The County shall investigate the feasibility of including a system of bicycle/hiking/equestrian paths into a community recreation program, specifically an improvement zone empowered to purchase lands.
- LA/OS 2.5 The County Parks Department, in coordination with the community, shall establish priorities and identify opportunities for park development and establish a park and recreation plan for the Lake Arrowhead Community. Priorities for consideration during the development of a park and recreation plan, as of the date of adoption of this plan, are as follows:

- A. The following properties have been identified by the Community as well suited for recreational development and should be researched as potential sites for recreational development.
  - iv. Santa's Village
  - v. Crest Park
  - vi. Church of the Woods
  - vii. Dam property, behind Mountain Community Hospital
- B. The plan shall address the following existing facilities, services and programs and shall provide for the continued operation and the potential enhancement of these services and facilities commensurate with growth.
  - i. Community Senior Center in Twin Peaks
  - ii. Ball Field in Twin Peaks
  - iii. Playground in Twin Peaks
  - iv. Childcare at school sites
  - v. Preschool in Rim Forest
  - vi. District offices, classrooms and conference room in Rim Forest
- C. The plan shall address the need for ongoing partnerships with the following groups:
  - i. Rim of the World Unified School District
  - ii. Boys and Girls Club
  - iii. Dam Commission (correct name?)
  - iv. United States Forest Service
  - v. County Regional Parks Department
  - vi. Chamber of Commerce
  - vii. Developers
  - viii. Builders and Contractors
- D. The plan shall evaluate the need for development and expansion of staff positions serving the Rim of the World Recreation and Park District.
- E. The plan shall establish ongoing revenue generating programs. The following funding mechanisms shall be considered:
  - i. Grants
  - ii. Fundraisers
  - iii. Sponsors
  - iv. Ballot Measure to increase park fee
  - v. Development/permit fees for new construction and remodels

LA/OS 2.6      Encourage the development of recreational facilities within community parks such as, swimming pools, athletic facilities and community centers.

## 7 CONSERVATION

### LA7.1 INTRODUCTION

Preservation and protection of the Community Plan area's natural and historic resources is extremely important to the residents of Lake Arrowhead. These resources contribute to the character, the appeal and subsequently to the economic viability of the area. If the plan area's sensitive resources are not effectively protected and managed, they will be permanently lost.

#### A. Natural Resources and Historic Resources

The natural resources such as the vegetation, wildlife, rock formations, streambeds, lakes etc contribute to the beauty and character of the area. Residents are concerned that unmanaged growth threatens the viability of these natural resources and desire appropriate management of these resources, particularly water resources.

The plan area is covered with a diverse biotic community of trees and other vegetation, fish birds, reptiles, mammals and other natural resources such as streams and lakes. The plan area includes the following general habitat types and respective sensitive species are associated with these habitats (For a detailed list of the sensitive species associated with the various habitats see the Conservation Background Report of the General Plan):

- A. Chaparral
- B. Sage Scrub
- C. Oak Woodlands
- D. Conifer Forest

In addition, preservation of historic resources is also important to residents and their desire to maintain the character of the plan area. In the 1981 Community Plan, a number of sites were identified within the Lake Arrowhead plan area as being of significant historic and/or cultural value. The list included Saw Mill sites, historical monuments and other sites such as Strawberry Lodge, Redwood Ranch, Skyforest Resort, etc. (A full list of historical sites and structures is included in the Appendix).

### LA7.2 GOALS AND POLICIES

<b>Goal LA/CO 1.</b>	<b>Protect streambeds and creeks from encroachment or development that detracts from their beauty.</b>
----------------------	--

#### Policies

- |           |  |
|-----------|--|
| LA/CO 1.1 | Utilize open space and drainage easements as well as clustering of new development as stream preservation tools. |
| LA/CO 1.2 | Require naturalistic drainage improvements where modifications to the natural streamway are required.            |

## CONSERVATION

- LA/CO 1.3 Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.
- LA/CO 1.4 Streams shall not be placed in underground structures in any Residential, Neighborhood Commercial or public land use district or zone.
- LA/CO 1.5 Development that is found consistent with the Floodway (FW) land use district or zone shall neither alter the natural stream course alignment nor alter natural flows.

<b>Goal LA/CO 2.</b>	<b>Enhance and maintain the quality of water from Lake Arrowhead and Grass Valley Lake, their tributaries and underground water supplies.</b>
----------------------	---

### Policies

- LA/CO 2.1 Require the hook-up to sewers of any properties currently adjacent to lines within the Lake Arrowhead CSD district through notification by the CSD district.
- LA/CO 2.2 Enforce grading and landscaping standards to reduce soil erosion.
- LA/CO 2.3 Ensure that the County Building Code incorporates appropriate construction activity control measures.

<b>Goal LA/CO 3.</b>	<b>Maintain the health and vigor of the forest environment.</b>
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### Policies

- LA/CO 3.1 Require the re-vegetation of any graded surface with suitable native drought and fire resistant planting to minimize erosion.
- LA/CO 3.2 Establish a parking provision for the purpose of saving healthy trees in parking areas by giving parking credit for areas containing specimen trees.
- LA/CO 3.3 The County Land Use Services Department shall work with the local Fire Safe Council and Fire agencies in the development of Community Wildfire Protection Plans (CWPP) for the mountain communities. As part of this effort a study shall be prepared to determine appropriate forest management techniques and identify any necessary modifications to the County's Tree Preservation Ordinance to ensure the long term health of the forest.

<b>Goal LA/CO 4.</b>	<b>Preserve the significant historical sites and structures which contribute to the unique character of the Lake Arrowhead Community Plan area.</b>
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### Policies

- LA/CO 4.1 The County shall identify and inventory local historical sites and structures.
- LA/CO 4.2 Establish funding mechanisms for historic preservation through State and Federal grant programs, private trusts, local tours and publications which explain the history of these facilities.

## 8 SAFETY

### LA8.1 INTRODUCTION

Fire protection and emergency services are among the most crucial of community needs. The quality of life is dependent on the adequacy of these services. The mountain region as a whole exhibits a combination of several factors which exposes development and natural resources to potential disaster from wildland fires and subsequent flooding and erosion. The factors include topography, climate, vegetation, pathogen infestation, and human use and occupancy.

#### A. Fire Services

Fire protection services are mainly provided by the Lake Arrowhead Fire Protection District and Crest Forest Fire Protection District (See Figure 8-1, Fire Districts Map). The San Bernardino County Fire Department (SBCFD) provides administration and support for these fire districts and other services such as hazardous materials regulation, dispatch communication and disaster preparedness. In the mountains, the San Bernardino County Fire Department (SBCFD) provides services through the Mountain Division of their department<sup>11</sup>.

Other agencies providing fire protection services and or fire related information for the Lake Arrowhead communities include the California Department of Forestry and Fire Protection (CDF) and the Mountain Area Safety Taskforce (MAST)<sup>12</sup>

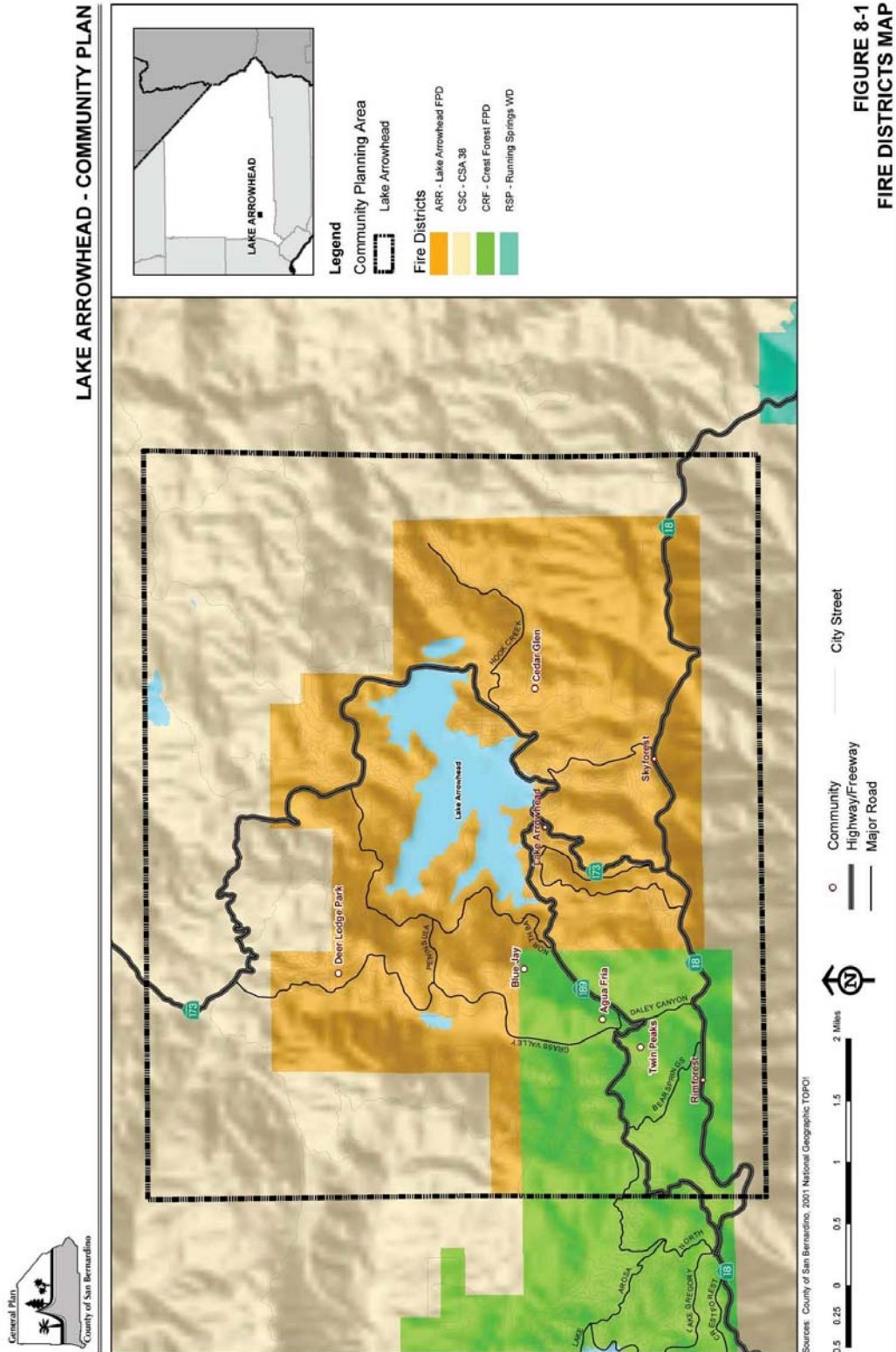
There are nine fire stations located within the Lake Arrowhead Community Plan Area, two of which are U.S. Forest Service Stations: the Rock Camp USFS Station and Sky Forest USFS Station. All stations are listed in the table below (See Figure 8-2, Fire Stations Map).

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<sup>11</sup> More details on the Mountain Division of the SBCFD can be found in the Safety Background Report of the General Plan.

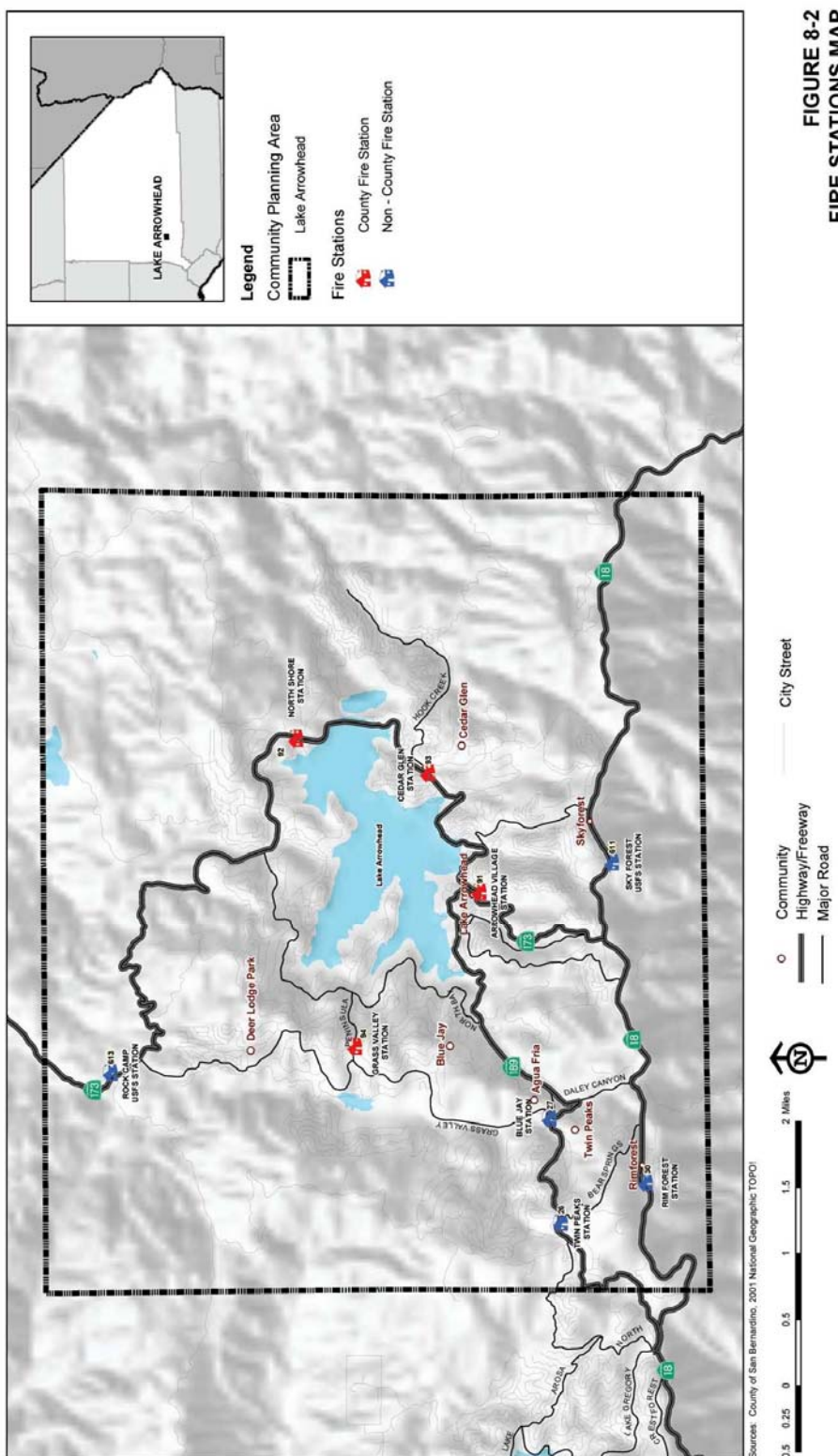
<sup>12</sup> More details on CDF and MAST can be found in the Safety Background Report of the General Plan.

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## SAFETY



**Table 8: Fire Stations**

<b>Fire Stations</b>	<b>Fire District</b>	<b>Area Served</b>	<b>Equipment</b>	<b>Personnel (Number and Title)</b>	<b>EMT Response Capabilities</b>	<b>Availability of Ambulance Services</b>	<b>Nearest Medical Facilities</b>
Rock Camp USFS Station	County Service Area 38 (San Bernardino County)	Per USFS this station is closed			up to 10 staff available	none	
Sky Forest USFS Station #11	Lake Arrowhead Fire Protection District	Lake Arrowhead, Running Springs, Crestline	1 engine, utility vehicles	1 crew capt, 3-4 person crew	up to 10 staff available	none	Mountain Community Hospital (MTCH)
North Shore Station 92	Lake Arrowhead Fire Protection District	Northeast shore of Lake Arrowhead	Fire boat, Snow Loader, Snow Cat (SC), Medic Ambulance (MA) 92, Water Tender (WT) 92, Medic Engine (ME) 92	3 capt, 3 engineers, 3 firefighters	9 staff	Medic Ambulance (MA) 92 Lake Arrowhead	Mountain Community Hospital (MTCH)
Cedar Glen Station 93	Lake Arrowhead Fire Protection District	Cedar Glen	No equipment currently housed	None	None	Medic Ambulance (MA) 92, Medic Ambulance (MA) 91, Medic Ambulance	Mountain Community Hospital (MTCH)

## SAFETY

Fire Stations	Fire District	Area Served	Equipment	Personnel (Number and Title)	EMT Response Capabilities	Availability of Ambulance Services	Nearest Medical Facilities
						(MA) 94 Lake Arrowhead	
Arrowhead Village Station 91	Lake Arrowhead Fire Protection District	South shore of Lake Arrowhead	Heavy Rescue, Snow Loader, Snow Cat and Paramedic Ambulance, Engine 91, R91, Medic Ambulance (MA) 91, Medic Ambulance (MA) 91R	3 capt, 3 engineers, 3 Firefighters, 3 Limited Term (LT), 3 firefighter/pm	15 staff	Medic Ambulance (MA) 91, Medic Ambulance (MA) 91R Lake Arrowhead	Mountain Community Hospital (MTCH)
North Bay/Peninsula Station #94	Lake Arrowhead Fire Protection District	West Shore of Lake Arrowhead	Paramedic Ambulance, Bob Cat, Snow Loader, Engine 94, Medic Ambulance (MA) 94	3 capt, 3 engineers, 3 Limited Term (LT), 3 firefighter/pm	12 staff	Medic Ambulance (MA) 94 Lake Arrowhead	Mountain Community Hospital (MTCH)
Blue Jay Station #27	Crest Forest Fire Protection District	Blue Jay	No equipment currently housed	None	None	none	Mountain Community Hospital (MTCH)
Twin Peaks Station #26	Crest Forest Fire Protection District	Twin Peaks, Blue Jay, Rim Forest, All Crest Forest District	Medic Ambulance (MA) 26, Snow Cat (SC) 26, Loader (LDR) 26, Brush	5 Firefighters, 2 PM, 10 Paid Call Firefighters (PCF)	5 staff	Medic Ambulance (MA) 26 Crest Forest	Mountain Community Hospital (MTCH)

## SAFETY



Fire Stations	Fire District	Area Served	Equipment	Personnel (Number and Title)	EMT Response Capabilities	Availability of Ambulance Services	Nearest Medical Facilities
			Engine (BE) 26, TLR26, Medic Engine (ME) 26, Rescue (RS) 26, Utility 26				
Rim Forest Station #30	Crest Forest Fire Protection District	Rim Forest, All Crest Forest District	Engine 30, Water Tender (WT) 30	10 Paid Call Firefighters (PCF)	none	none	Mountain Community Hospital (MTCH)

[Insert discussion of the preparation of Community Wildfire Protection Plans (CWPP) in fire prone communities. The effort is being undertaken by local Fire Safe Councils and Fire Agencies – additional information to be provided by County Staff.]

**B. Evacuation Routes**

Residents' primary concerns regarding safety in their community revolve around fire protection and the need for improved evacuation routes. SR-189, SR-173, SR-18, Grass Valley Rd, Daley Canyon, North Bay and Peninsula are designated as evacuation routes. Specific evacuation routes will be designated during an emergency in order to respond to the specific needs of the situation and circumstances surrounding the disaster and will be handled in accordance with the evacuation procedures contained within the County emergency management plan.

## LA8.2 GOALS AND POLICIES

<b>Goal LA/S 1.</b>	<b>Provide adequate fire safety measures to protect residents of the plan area.</b>
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**Policies**

- LA/S 1.1      Ensure that all new development complies with applicable provisions of the Fire Safety Overlay District. **[COUNTYWIDE/REGIONAL POLICY]**
- LA/S 1.2      The County Fire Department shall work with the community and appropriate local Fire Protection agencies to ensure that there is continued evaluation and consideration of the fire protection and fire service needs of the community commensurate with population growth.
- LA/S1.3      The County Land Use Services Department shall work with the local Fire Safe Council and Fire agencies in the development of Community Wildfire Protection Plans (CWPP) for the mountain communities. As part of this effort a study shall be prepared to determine appropriate forest management techniques and identify any necessary modifications to the County's Tree Preservation Ordinance to ensure the long term health of the forest.

<b>Goal LA/S 2.</b>	<b>Ensure that emergency evacuation routes will adequately evacuate all residents and visitors in the event of a natural disaster.</b>
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**Policies**

- LA/S 2.1      The County Fire Department shall work with the Public Works Department and Caltrans to ensure that an adequate road system and proper access are provided to ensure safe and efficient evacuation for residents and visitors of the mountain communities. **[COUNTYWIDE/REGIONAL POLICY]**
- LA/S 2.2      Work with the various fire agencies, the Fire Safe Councils, Caltrans and the community to ensure the development of an affective firebreak system.
- LA/S 2.3      Work with USFS to explore opportunities to develop access routes for evacuation purposes only through the National Forest. Evacuation routes through the National Forest would only be used in the event that primary evacuation routes are found to be inadequate.

## 9 ECONOMIC DEVELOPMENT

### LA9.1 INTRODUCTION

As has been repeated throughout the various elements included within this community plan, one of the most important goals of the Lake Arrowhead Community is to protect the mountain character. It will be important to ensure that future development protects and enhances the natural resources, scenic beauty, and alpine character in order to continue to appeal to both residents and visitors.

The local economy is driven by recreation and tourism. Lake Arrowhead and the National Forest provide opportunities for outdoor recreation. Downtown Lake Arrowhead is the primary commercial area within the community plan area and a major tourist attraction. This commercial center provides a mixture of retail establishments, restaurants, and service uses.

Residents expressed concerns regarding the prosperity of local businesses. They also emphasized the need to ensure that commercial and industrial services continue to support community needs and enhance tourism opportunities. However, residents also expressed concerns regarding the potential impacts that tourism in combination with an increasing permanent population could have on their community, particularly with regard to traffic congestion and parking.

### LA 9.2 GOALS AND POLICIES

<b>Goal LA/ED 1.</b>	<b>Promote economic development that is compatible with the mountain character of the Lake Arrowhead Community.</b>
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#### Policies

- |           |   |
|-----------|---|
| LA/ED 1.1 | Encourage development and business activities that capitalize on the amenities and recreational activities contained within the National Forest and offered by Lake Arrowhead.  |
| LA/ED 1.2 | Support commercial and light industrial development that is of a size and scale that complements the natural setting, is compatible with surrounding development, and enhances the alpine character.  |
| LA/ED 1.3 | Support the development of design standards for commercial development within the plan area. Design standards should focus on improving parking and circulation, enhancing the pedestrian experience, and focusing on building architecture and site design to be compatible with the mountain character. |
| LA/ED 1.4 | Encourage the creation of hiking and biking trails as tourist attractions.  |

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## 10 UNIQUE DEVELOPMENT STANDARDS

### LA10.1 REFERENCE

[Cross-reference those unique development standards incorporated into the Development Code that are unique to the individual Community Plan area]

## UNIQUE DEVELOPMENT STANDARDS

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## APPENDIX

### IMPLEMENTATION SCHEDULE

\*The implementation status of some policies is unknown as they are contingent upon funding, as approved on an annual basis by the Board of Supervisors.

<u>POLICY</u>		<u>RESPONSIBLE AGENCY/ DEPARTMENT</u>	<u>STATUS</u>
<b>Land Use</b>			
LV/LU 1.1	Require strict adherence to the land use policy map unless proposed changes are clearly demonstrated to be consistent with the community character.	Land Use Services Department	Ongoing
HT/LU 1.2	<p>In recognition of the communities' desire to preserve the rural character and protect the area's natural resources, projects that propose to increase the density of residential land uses or provide additional commercial land use districts or zones within the plan area should only be considered if the following findings can be made:</p> <p>A. That the change will be consistent with the community character. In determining consistency the entire General Plan and all elements of the Community Plan shall be reviewed.</p> <p>B. That the change is compatible with surrounding uses, and will provide for a logical transition in the plan area's development. One way to accomplish this is to incorporate planned development concepts in the design of projects proposed in the area.</p> <p>C. That the change shall not degrade the level of services provided in the area, and that there is adequate infrastructure to serve the additional development that could occur as a result of the change. Densities should not be increased unless there are existing or assured services and infrastructure, including but not limited to water, wastewater, circulation, police, and fire, to accommodate the increased densities</p>	Land Use Services Department	Ongoing
HT/LU 1.3	<p>Regulate the density of development in sloping hillside areas in order to reduce fire hazards, prevent erosion, and to preserve existing vegetation and the visual qualities of the plan area. One method this can be accomplished by is requiring adherence to the following hillside development standards required by the Fire Safety Overlay District:</p> <p>A. Residential density: the density of development for any tentative parcel map or tentative tract map in sloping hillside areas shall be in accordance with the</p>	Land Use Services Department	Ongoing

	<p>following criteria:</p> <ul style="list-style-type: none"> <li>i. One to four (1-4) dwelling units per gross acre on slopes of zero to less than fifteen percent (0 - &lt;15%)</li> <li>ii. Two (2) dwelling units per gross acre on slopes of fifteen to less than thirty percent (15 - &lt;30%)</li> <li>iii. One (1) dwelling unit per three (3) gross acres on slopes of greater than thirty percent (30%) gradient</li> </ul> <p>B. When twenty-five percent (25%) or more of a subdivision project site involving five (5) or more lots is located on natural slopes greater than thirty percent (30%), the subdivision application shall be submitted concurrently with a Planned Development application to evaluate appropriate project design in consideration of topographic limitations of the site. This provision shall not apply if all of the areas on the site with natural ungraded slopes over thirty percent (30%) are permanently restricted from structural development.</p>		
LA/LU 1.4	<p>Prohibit construction of new high density residential development along the shore of Lake Arrowhead and Grass Valley Lake in order to protect the scenic qualities. No additional RM districts or zones shall be permitted in the following areas:</p> <ul style="list-style-type: none"> <li>A. Grass Valley Lake: between the shoreline and Golf Course Road north of Lake Arrowhead Country Club, Brentwood Drive north of Riviera Drive and Cumberland (beyond the Blueridge Development Project). ]</li> <li>B. Lake Arrowhead: generally between the shoreline and North Shore Road.</li> <li>C. Twin Peaks: along State Highway 189.</li> </ul>	Land Use Services Department	Ongoing
LA/LU 1.5	<p>Establish locational criteria for future Multiple Family Residential (RM) districts or zones to areas that are:</p> <ul style="list-style-type: none"> <li>A. In close proximity to commercial areas;</li> <li>B. Adjacent to a mountain secondary or greater width roadway;</li> <li>C. Where adequate circulation exists;</li> <li>D. Where services are available or assured;</li> <li>E. Where average slopes are relatively flat,</li> <li>F. Where compliance with fires safety standards can be met.</li> </ul>	Land Use Services Department	Ongoing
LA/LU 2.1	<p>The County, in coordination with the community, shall develop site design standards for commercial development within the plan area to ensure that architectural detailing and signage are compatible with the mountain character of the community, to ensure that sites are designed to be more pedestrian-friendly, and to</p>	Land Use Services Department	Ongoing

## APPENDIX



	provide adequate parking and buffers between commercial and adjacent residential uses.		
LA/LU 2.2	Commercial recreation and tourist facilities should be located, designed, and controlled to protect the residential-recreation character of the area. This can be accomplished by: A. Limiting commercial tourist facilities to Lake Arrowhead Village, Blue Jay and Cedar Glen along State Highway 18.	Land Use Services Department	To be determined
LA/LU 2.3	Neighborhood commercial uses shall be buffered from adjacent residential uses through transitional land uses and/or design features such as enhanced setbacks and landscaping and/or other screening materials.	Land Use Services Department	Ongoing
LA/LU 2.4	Minimize strip commercial development by encouraging the expansion of commercial uses within existing core commercial nodes.	Land Use Services Department	Ongoing
LA/LU 2.5	All new commercial sites, through the Planning Department site approval process, shall be reviewed to ensure that the site is large enough to accommodate required parking and access.	Land Use Services Department	Ongoing
LA/LU 2.6	All architecture and outside facades of commercial structures shall be in keeping with the mountain character. Natural woods and masonry shall be used as much as practicable, and shall be reviewed for conformance during the Planning Department site approval process.	Land Use Services Department	Ongoing
LA/LU 2.7	Industrial land uses shall be located in areas where industrial uses will best serve the needs of the community, and will have a minimum adverse effect upon surrounding property with minimal disturbance to the mountain environment and the total community.	Land Use Services Department	Ongoing
LA/LU 2.8	Limit future industrial development to that which is necessary to meet the service, employment and support needs of local residents, and does not adversely impact the mountain environment. This can be accomplished by: A. Fully screen all open storage activities with fencing and indigenous-landscaping, limit open storage to the rear 75% of any parcel. B. Require the architecture and appearance of all buildings to be compatible with the mountain character; natural wood and masonry shall be used; as much as possible and review for conformance during the site approval process.	Land Use Services Department	Ongoing
LA/LU 2.9	New industrial uses which generate heavy truck traffic shall only be allowed in appropriately zoned areas located off of State Highway 18.	Land Use Services Department	Ongoing
<b>Circulation</b>			

## APPENDIX

LA/CI 1.1	The County shall ensure that all new development proposals do not degrade Levels of Service (LOS) on State Routes and Major Arterials below LOS C during non-peak hours or below LOS E during peak-hours.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 1.2	The County shall require a traffic impact analysis report to identify impacts and mitigation measures for projects that may result in potentially significant impacts and limit new construction which would require significant improvements to the existing road system in order to handle project ingress, egress and traffic volumes until such time that the required improvements are completed. Significant improvements include anything other than additional turn lanes, transition lanes and stop signs.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 1.3	Work with Caltrans to ensure that transportation system improvements are made to SR-18 where transportation facilities are operating near full capacity. The County shall work with Caltrans to identify existing and future deficiencies, such as the need for alternate routes, widening existing roads, providing turn lanes, and considering weekend traffic volumes in traffic analysis.	Public Works Department	Ongoing
LA/CI 1.4	Minimize the traffic load on SR-18, SR-173, and SR-179 by requiring projects to minimize direct access to these main circulation roads, and encourage shared driveways for industrial and commercial uses on adjacent properties to promote use of the main circulation roads as throughways.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 1.5	Protect rights-of-way for mountain highways shown on the circulation portion of the County General Plan. The Public Works department shall require dedications as entitlements are given.	Public Works Department	Ongoing
LA/CI 1.6	Design roads to follow natural contours, avoid grid pattern streets, minimize cuts and fills and disturbance of natural resources and trees wherever possible.	Public Works Department	Ongoing
LA/CI 1.7	Provide access control, traffic system management and other improvements on the roadway system within the plan area in keeping with the scenic sensitivity of the community plan area. One method this can be accomplished by is, to the maximum extent possible, use alternatives to the construction of new traffic signals where they can be shown to benefit roadway capacity and are compatible with the mountain character of the community.	Public Works Department	Ongoing
LA/CI 1.8	Preservation and protection of sensitive habitats shall have priority over road location, relocation or realignment, when other practical alternatives are available.	Public Works Department	Ongoing
LA/CI 1.9	Design road sections for mountain roads to be flexible in	Public Works	Ongoing

## APPENDIX



	terms of required right of way widths and roadway widths, however existing two-lane roads should be maintained. Road widenings should be limited to safety type improvements and those that would facilitate flow such as turning lanes, passing lanes, intersection widenings and shoulder widenings.	Department	
LA/CI 1.10	Complete Cumberland Road from Cedar Glen to State Highway 18 near Santa's Village as a condition of development of the adjacent area and ensure protection of the character of the surrounding area by the following: A. Require that Cumberland Road be designated as a County Scenic Route. B. Require that Cumberland Road be used primarily for residential and emergency traffic. C. Prohibit trucks that exceed 5 tons and vehicles pulling large trailers.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 1.11	Preserve the status of Kuffel Canyon, Grass Valley Road, SR-173 and SR-18 as County scenic routes, and ensure protection of their natural features through the following methods: A. Require compliance with the provisions of the Scenic Resources Overlay District. B. Support hillside preservation regulations that will include standards for hillside development to control densities, allowable cut and fill heights, soil and slope stability, grading and blending of contours, structural relationships, building foundations, and the like.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 1.12	Seek State support and assistance for the designation of State Highways 18 and 173 as official State Scenic Routes.	Public Works Department	Ongoing
LLA/CI 2.1	Prohibit on-street parking where it reduces highway design capacity and limits snow plowing effectiveness.	Public Works Department, County Sheriff's Department	Ongoing
LA/CI 2.2	Control access onto all State highways and County mountain secondary highways.	Public Works Department, County Sheriff's Department	Ongoing
LA/CI 2.3	The County shall limit and control the location and extent of all land uses which generate increased levels of traffic beyond the designed capacity of the existing and planned highways.	Land Use Services Department	Ongoing
LA/CI 3.1	The County shall research the feasibility of using excess right-of-way not needed for road construction for bicycle and pedestrian trails. Priority shall be given to providing trails within the right-of-way (or adjacent to) the following roadways: A. Work with Caltrans to establish bicycle trails along one side of State Highways 173 and 189 through the	Public Works Department	Ongoing

	plan area. Encourage connections to trails outside the plan area. B. Provide trails in North Bay Road, Grass Valley Road, Hook Creek Road and Cumberland Road. Encourage connections to local and/or regional trails.		
LA/CI 3.2	Where feasible, establish and coordinate a system of bicycle and pedestrian trails connecting residential areas to recreational facilities, the National Forest and commercial activity centers. Promote safe and attractive pedestrian and bicycle crossings at logical points on the Circulation Element roads and where feasible pursue opportunities to separate pedestrian and bicycle traffic from vehicular traffic particularly along SR-18, SR-173 and SR-189.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 3.3	Where feasible, provide pedestrian improvements in commercial activity centers to enhance safety, provide a high quality visitor experience, enhance the mountain character of the area and reduce the need for vehicular travel.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 3.4	Require school bus stop shelters as needed, when road improvement or widening is required as part of an adjacent development.	Public Works Department	Ongoing
LA/CI 4.1	Define the existing and future transportation needs as they may relate to transit for residents, employees and visitors in the mountain region. When transportation needs are defined the Transportation Department shall conduct a feasibility study to determine the feasibility and cost-effectiveness of instituting alternative transportation recommendations.	Public Works Department	To be determined
LA/CI 4.2	Evaluate additional service needs that could be provided by the Mountain Area Regional Transit Authority (MARTA) through coordination with MARTA and residents of the mountain communities.	Public Works Department	Ongoing
<b>Infrastructure</b>			
LA/CI 5.1	Through the development review process, permit new development only when adequate water supply is existing or can be assured.	Land Use Services Department	Ongoing
LA/CI 5.2	Support efforts to continue and improve cooperation and communication among water providers and the County in addressing water related issues.		Ongoing
HT/CI 5.3	Support conjunctive use (operating water resources under a common management) of the area's water supplies.		Ongoing
HT/CI 5.4	Support programs to use reclaimed water from mountain sewage systems to augment local water supplies when such reclamation is consistent with public health and environmental standards.		Ongoing
LA/CI 6.1	Support conservation and efficient water use in an effort to minimize the need for new water sources.		Ongoing



## APPENDIX



LA/CI 6.2	The County, in coordination with local water providers, shall provide education for voluntary water conservation. Plan and implement educational programs and events promoting water conservation.		Ongoing
LA/CI 6.3	Promote the use of native low water use vegetation, especially drought tolerant plants in landscaping and discourage inappropriate use of vegetation unsuited to the mountain climate.	Land Use Services Department, Public Works Department	Ongoing
LA/CI 6.4	Minimize the use of turf grass.		Ongoing
LA/CI 6.5	Promote use of water efficient irrigation practices for all landscaped areas.		Ongoing
LA/CI 7.1	The County shall work with USFS to ensure that improvements or development of infrastructure facilities adjacent to the National Forest are non-invasive and do not adversely affect the natural environment.		Ongoing
LA/CI 7.2	Mitigate the visual impacts of facilities, structures, utilities and mechanical installations through the development of appropriate screening and location criteria.	Land Use Services Department	Ongoing
LA/CI 7.3	Coordinate with service providers to relocate existing overhead utilities underground along existing roadways and require underground utilities in new developments.	Land Use Services, Public Works Department	Ongoing
<b>Open Space</b>			
LA/OS 1.1	Encourage the exchange of properties between the Forest Service and private property owners to create better Forest Service boundary management.		Ongoing
LA/OS 1.2	The County shall work with USFS to designate areas for Off Highway Vehicle use and establish programs for Off Highway Vehicle use education.	Parks Department	Ongoing
LA/OS 1.3	The County shall work with USFS to explore land exchange opportunities that would provide additional areas for open space and recreational opportunities.	Parks Department	Ongoing
LA/OS 1.4	The County shall assign an appropriate land use district or zone to available exchange lands.	Land Use Services Department	Ongoing
LA/OS 2.1	Establish a plan for the development of a pedestrian/equestrian/bicycle trail system within the plan area. The plan shall incorporate the following recommendations: A. Where feasible pursue opportunities to separate pedestrian/bicycle/equestrian traffic from motorized vehicle traffic. B. Provide trail heads that link regional trails, the forest and forest service trails, recreational areas, residential areas, neighborhood trail systems and commercial nodes.	Land Use Services Department, Parks Department	Ongoing
LA/OS 2.2	If an approved trails plan is developed require dedication of trail easements as a condition of approval for all	Parks Department, Land Use Services	Ongoing

	development projects consisting of 5 or more residential lots. The trail easement shall allow unobstructed trail access and provide connections to off-site trails.	Department	
LA/OS 2.3	Review site plans to determine if residential and commercial uses are designed for pedestrian use. Future developments shall contain an internal system linking residential areas, recreational facilities, the National Forest and commercial activity centers.	Land Use Services Department	Ongoing
LA/CI 2.4	The County shall investigate the feasibility of including a system of bicycle/hiking/equestrian paths into a community recreation program, specifically an improvement zone empowered to purchase lands.	Land Use Services Department, Public Works Department	Ongoing
LA/OS 2.5	<p>The County Parks Department, in coordination with the community, shall establish priorities and identify opportunities for park development and establish a park and recreation plan for the Lake Arrowhead Community. Priorities for consideration during the development of a park and recreation plan, as of the date of adoption of this plan, are as follows:</p> <p>A. The following properties have been identified by the Community as well suited for recreational development and should be researched as potential sites for recreational development.</p> <ul style="list-style-type: none"> <li>i. Santa's Village</li> <li>ii. Crest Park</li> <li>iii. Church of the Woods</li> <li>iv. Dam property, behind Mountain Community Hospital</li> </ul> <p>B. The plan shall address the following existing facilities, services and programs and shall provide for the continued operation and the potential enhancement of these services and facilities commensurate with growth.</p> <ul style="list-style-type: none"> <li>i. Community Senior Center in Twin Peaks</li> <li>ii. Ball Field in Twin Peaks</li> <li>iii. Playground in Twin Peaks</li> <li>iv. Childcare at school sites</li> <li>v. Preschool in Rim Forest</li> <li>vi. District offices, classrooms and conference room in Rim Forest</li> </ul> <p>C. The plan shall address the need for ongoing partnerships with the following groups:</p> <ul style="list-style-type: none"> <li>i. Rim of the World Unified School District</li> <li>ii. Boys and Girls Club</li> <li>iii. Dam Commission (correct name?)</li> <li>iv. United States Forest Service</li> <li>v. County Regional Parks Department</li> <li>vi. Chamber of Commerce</li> <li>vii. Developers</li> </ul>	Parks Department	Ongoing

## APPENDIX



	<p>viii. Builders and Contractors</p> <p>D. The plan shall evaluate the need for development and expansion of staff positions serving the Rim of the World Recreation and Park District.</p> <p>E. The plan shall establish ongoing revenue generating programs. The following funding mechanisms shall be considered:</p> <ul style="list-style-type: none"> <li>i. Grants</li> <li>ii. Fundraisers</li> <li>iii. Sponsors</li> <li>iv. Ballot Measure to increase park fee</li> <li>v. Development/permit fees for new construction and remodels</li> </ul>		
LA/OS 2.6	Encourage the development of recreational facilities within community parks such as, swimming pools, athletic facilities and community centers.	Parks Department	
<b>Conservation</b>			
LA/CO 1.1	Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.	Land Use Services Department	Ongoing
LA/CO 1.2	Require naturalistic drainage improvements where modifications to the natural streamway are required.	Public Works Department	Ongoing
LA/CO 1.3	Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.	Public Works Department	Ongoing
LA/CO 1.4	Streams shall not be placed in underground structures in any Residential, Neighborhood Commercial or public land use district or zone.	Land Use Services Department, Public Works Department	Ongoing
LA/CO 1.5	Development that is found consistent with the Floodway (FW) land use district or zone shall neither alter the natural stream course alignment nor alter natural flows.	Land Use Services Department	Ongoing
LA/CO 2.1	Require the hook-up to sewers of any properties currently adjacent to lines within the Lake Arrowhead CSD district through notification by the CSD district.	Land Use Services Department	Ongoing
LA/CO 2.2	Enforce grading and landscaping standards to reduce soil erosion.	Land Use Services Department, Public Works Department	Ongoing
LA/CO 2.3	Ensure that the County Building Code incorporates appropriate construction activity control measures.	Building and Safety Department	Ongoing
LA/CO 3.1	Require the re-vegetation of any graded surface with suitable native drought and fire resistant planting to minimize erosion.	Land Use Services Department, Public Works Department	Ongoing
LA/CO 3.2	Establish a parking provision for the purpose of saving trees in parking areas by giving parking credit for areas	Land Use Services Department	Ongoing

## APPENDIX

	containing specimen trees.		
LA/CO 3.3	The County Land Use Services Department shall work with the local Fire Safe Council and Fire agencies in the development of Community Wildfire Protection Plans (CWPP) for the mountain communities. As part of this effort a study shall be prepared to determine appropriate forest management techniques and identify any necessary modifications to the County's Tree Preservation Ordinance to ensure the long term health of the forest.	Fire Department, Land Use Services Department	To be determined
LA/CO 4.1	The County shall identify and inventory local historical sites and structures.	Land Use Services Department	To be determined
LA/CO 4.2	Establish funding mechanisms for historic preservation through State and Federal grant programs, private trusts, local tours and publications which explain the history of these facilities.		Ongoing
<b>Safety</b>			
LA/S 1.1	Ensure that all new development complies with applicable provisions of the Fire Safety Overlay District.	Land Use Services Department	Ongoing
LA/S 1.2	The County Fire Department shall work with the community and appropriate local Fire Protection agencies to ensure that there is continued evaluation and consideration of the fire protection and fire service needs of the community commensurate with population growth.	Fire Department	Ongoing
LA/S1.3	The County Land Use Services Department shall work with the local Fire Safe Council and Fire agencies in the development of Community Wildfire Protection Plans (CWPP) for the mountain communities. As part of this effort a study shall be prepared to determine appropriate forest management techniques and identify any necessary modifications to the County's Tree Preservation Ordinance to ensure the long term health of the forest.	Fire Department, Land Use Services Department	To be determined
LA/S 2.1	The County Fire Department shall work with the Public Works Department and Caltrans to ensure that an adequate road system and proper access are provided to ensure safe and efficient evacuation for residents and visitors of the mountain communities.	Fire Department, Public Works Department, Caltrans	Ongoing
LA/S 2.2	Work with the various fire agencies, the Fire Safe Councils, Caltrans and the community to ensure the development of an affective firebreak system.	Fire Department, Land Use Services Department	Ongoing
LA/S 2.3	Work with USFS to explore opportunities to develop access routes for evacuation purposes only through the National Forest. Evacuation routes through the National Forest would only be used in the event that primary evacuation routes are found to be inadequate.	Fire Department	Ongoing
<b>Economic Development</b>			
LA/ED 1.1	Encourage development and business activities that	Land Use Services	Ongoing

## APPENDIX



	capitalize on the amenities and recreational activities contained within the National Forest and offered by Lake Arrowhead.	Department, Economic and Community Development Department	
LA/ED 1.2	Support commercial development that is of a size and scale that complements the natural setting, is compatible with surrounding development, and enhances the alpine character.	Land Use Services Department, Economic and Community Development Department	Ongoing
LA/ED 1.3	Support the development of design standards for commercial development within the plan area. Design standards should focus on improving parking and circulation, enhancing the pedestrian experience, and focusing on building architecture and site design to be compatible with the mountain character.	Land Use Services Department	Ongoing
LA/ED 1.4	Encourage the creation of hiking and biking trails as tourist attractions.	Land Use Services Department, Public Works Department	Ongoing

## Historical Sites and Structures

### Saw Mill Sites

1. La Praix- Fleming, 1870- 1896, lake bottom off Edgewater Beach
2. Suverkrup- Hooks, 1888- 1914, Hooks Creek in Lakebrook
3. Caley- BeeVee, 1864- 1878, Blue Jay
4. Houston Clipper, 1864- 1874, Grass Valley area
5. Tyler, 1869- 1892, near 7<sup>th</sup> Green, Grass Valley golf Course
6. Sherman- Metcalf, 1874- 1878, north of Santa's Village at the head of Hook Creek
7. Talmadge, 1876- 1895, Hamiltair- North Bay area
8. Guernseys Burnt Mill, 1883- 1886, Meadowbrook
9. Van Slyke- Guernsey, 1885- 1891, Willow Creek area
10. Baker's, 1922- 1923, State Highway 18

### Other Sites and Structures

1. Strawberry Lodge
2. Squirrel Inn, 1882
3. Rock Wood, Fire House Loop, hand made by A.E Scoles, 1920
4. Dobbins & Lowe, Fernrock Ranch, 1887 (Lowe house built in 1927)
5. Redwood Ranch, 1915, trout ponds, etc. (now Rimforest)
6. Old Homestead, Skyforest, built in 1890 by Hansen
7. Movie Point, Lake Arrowhead
8. Lake Arrowhead Tunnel System
9. Elevator to Tower Controls, Doheny property, Lake Arrowhead (formerly Camp 1 for crews building dam)
10. Gate House early Campground, corner of John Muir and State Highway 173
11. Skyforest resort, built in late 1920's (now Shanty Town)
12. North Shore Tavern, built in late 1920's (now U.C. Conference Center)
13. Lake Arrowhead Elementary School, dedicated in 1926 (now County Building)
14. Mile Hi Resort- Stillens
15. Redwood Grove, planted in 1930'2 by U. S. Forestry (beyond Baker's Old Mill)
16. Joe Henck Memorial Redwood Grove, 1958, State Highway 18, Skyforest

### Historical Monuments

1. Indian Rock Camp, State Highway 173, U.S. Forestry
2. Daley Canyon Monument, State Highway 18
3. 101 Mile Scenic Highway Monument, Rim of the World Drive (State Highway 18)